

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
PRINCE WILLIAM SOUND AREA

Annual Management Report
1975

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TABLE OF CONTENTS

	Page
PREFACE	i
INTRODUCTION	1
ECONOMIC CONDITIONS	6
PRICE OF FISH AND SHELLFISH	11
AVERAGE WEIGHT AND NUMBER OF SALMON PER CASE	11
TIME OPEN TO FISHING AND CALENDAR WEEKS	11
SALMON FISHERY	
BERING RIVER DISTRICT	
Introduction	17
Commercial Fishery	17
Escapement	17
COPPER RIVER DISTRICT	
Introduction	23
Commercial Fishery	23
Subsistence Fishery	24
Escapement	24
Age Composition	25
PRINCE WILLIAM SOUND DISTRICTS	
Introduction	37
General Districts, Purse Seine Fishery	37
Pink and Chum Salmon Forecast	38
Escapement	38
Age Composition	39
ESHAMY DISTRICT	
Commercial Fishery	52
Escapement	52
COGHILL AND UNAKWIK DISTRICTS	
Commercial Fishery	61
Escapement	61
CRAB FISHERY	
Dungeness Crab	69
King Crab	69
Tanner Crab	69
HERRING AND HERRING SPAWN ON KELP FISHERY	
Herring Fishery	77
Herring Spawn on Kelp Fishery	78
MISCELLANEOUS FISH AND SHELLFISH	
Razor Clams	86
Bottom Fish	86
Shrimp	86
Troll Fishery	86
COMMERCIAL LICENSE SALES	90
PERSONNEL	92

INDEX TO TABLES

	Page
OPERATORS	
Table 1. Fishery operators, 1975	2
SALMON CASE PACK	
Table 2. Prince William Sound Area case pack, 1975	8
SALMON CATCH VALUE	
Table 3. Average catch and value per fisherman, 1970 - 1975	9
GEAR, SALMON	
Table 4. Summary of salmon gear operated, 1960 - 1975	10
AVERAGE WEIGHTS, SALMON	
Table 5. Comparable average weights by area, 1970 - 1975	12
SALMON PER CASE	
Table 6. Number of salmon per case, Prince William Sound from 1954	13
Table 7. Number of salmon per case, Copper and Bering rivers, 1951 - 1975	14
TIME OPEN TO FISHING	
Table 8. Time open to fishing, 1975	15
CALENDAR WEEKS	
Table 9. Calendar weeks, 1975	16
<u>BERING RIVER SALMON</u>	
CATCH	
Table 10. Sockeye salmon weekly catch, 1975	18
Table 11. King salmon weekly catch, 1975	18
Table 12. Coho salmon weekly catch, 1975	18
Table 13. Drift gill net salmon catch, 1955 - 1975	19
ESCAPEMENT	
Table 14. Comparable estimated sockeye salmon escapements, Copper River and Bering River districts, 1969 - 1975	22
<u>COPPER RIVER SALMON</u>	
CATCH, COMMERCIAL	
Table 15. Sockeye salmon weekly catch, 1975	26
Table 16. King salmon weekly catch, 1975	26
Table 17. Coho salmon weekly catch, 1975	28
Table 18. Drift gill net salmon catch, 1960 - 1975	30
CATCH, SUBSISTENCE	
Table 19. Subsistence fishery, 1975	31
ESCAPEMENT	
Table 20. Estimated Copper River delta sockeye salmon escapements, 1973 - 1975	32

Table 21.	Estimated upper Copper River sockeye and king salmon escapements, 1975	Page 33
AGE COMPOSITION		
Table 22.	Age composition of Copper River sockeye salmon, 1975	35
Table 23.	Age composition of Copper River king salmon, 1975	36
<u>PRINCE WILLIAM SOUND SALMON</u>		
SEASONS		
Table 24.	Summary of fishing seasons, 1960 - 1975	40
Table 25.	King salmon weekly catch by purse seines, 1975	41
Table 26.	Sockeye salmon weekly catch by purse seines, 1975	42
Table 27.	Coho salmon weekly catch by purse seines, 1975	43
Table 28.	Pink salmon weekly catch by purse seines, 1975	44
Table 29.	Chum salmon weekly catch by purse seines, 1975	45
FORECAST		
Table 30.	Comparisons of salmon forecasts showing percent of error, 1962 - 1975	47
ESCAPEMENT		
Table 31.	Pink, chum and sockeye salmon total estimated spawning escapement by district, 1975	48
Table 32.	Age composition of sockeye salmon from commercial catches .	50
<u>ESHAMY DISTRICT</u>		
CATCH		
Table 33.	Salmon catch, 1950 - 1975	53
WEIR		
Table 34.	Daily weir count, 1975	55
Table 35.	Weekly weir counts, 1961 - 1975	57
Table 36.	Weather data, 1975	59
<u>COGHILL AND UNAKWIK DISTRICTS</u>		
CATCH		
Table 37.	Purse seine and drift gill net weekly catch, 1975	62
WEIR		
Table 38.	Daily weir count, 1975	64
Table 39.	Weather data, 1975	65
ESCAPEMENT		
Table 40.	Coghill River escapement estimates, 1960 - 1975	67
<u>PRINCE WILLIAM SOUND CRAB</u>		
DUNGENESS CRAB		
Table 41.	Dungeness crab catch, 1975	70
Table 42.	Effort and total catch, 1975	71
KING CRAB		
Table 43.	King crab catch, 1975	73

TANNER CRAB

Table 44. Tanner crab catch, 1975	74
Table 45. Tanner crab length frequencies by season, 1971 - 1975 .	75

PRINCE WILLIAM SOUND MISCELLANEOUS FISH AND SHELLFISH

HERRING

Table 46. Herring and spawn on kelp, 1967 - 1975	79
Table 47. Herring catch, 1975	81
Table 48. Herring spawn on kelp harvest, 1975	81

RAZOR CLAMS

Table 49. Razor clam dig, 1975	87
--------------------------------------	----

BOTTOM FISH

Table 50. Bottom fish catch, 1975	88
---	----

SHRIMP

Table 51. Shrimp catch, 1975	88
------------------------------------	----

TROLL, SALMON

Table 52. Salmon troll catch, 1975	89
--	----

LICENSES AND RECEIPTS

Table 53. Commercial Fishing licenses and receipts, 1975	91
--	----

WHOLESALE VALUE

Table 54. Wholesale value of all fishery products, 1975	93
---	----

SALMON

Table 55. Wholesale value of king salmon, 1975	94
Table 56. Wholesale value of sockeye salmon, 1975	95
Table 57. Wholesale value of coho salmon, 1975	96
Table 58. Wholesale value of pink salmon, 1975	97
Table 59. Wholesale value of chum salmon, 1975	98

DUNGENESS, TANNER AND KING CRAB

Table 60. Wholesale value of crab, 1975	99
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MISCELLANEOUS FISH AND SHELLFISH

Table 61. Wholesale value of miscellaneous fish products, 1975 ...	100
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INDEX TO FIGURES

	Page
Figure 1. Fishing Districts	ii
Figure 2. Percentage value to fishermen of fish and shellfish harvested from the Prince William Sound Area, 1975	7
Figure 3. Bering River sockeye salmon catch and escapement, 1965 - 1975	20
Figure 4. Bering River coho salmon catch and effort, 1965 - 1975	21
Figure 5. Copper River sockeye salmon catch and escapement	27
Figure 6. Copper River coho salmon catch and effort	29
Figure 7. Commercial catches of pink, chum and sockeye salmon in Prince William Sound from 1920 to 1975	46
Figure 8. Annual estimated salmon spawning escapement in Prince William Sound, 1927 - 1975	49
Figure 9. Eshamy district commercial salmon catches, 1961 - 1975	54
Figure 10. Annual Eshamy River weir sockeye escapement counts, 1961-1975	58
Figure 11. Coghill and Unakwik district commercial salmon catches, 1961 - 1975	63
Figure 12. Annual Coghill River aerial salmon spawning escapement, 1961 - 1975	68
Figure 13. Commercial catch of Dungeness crab landed at Cordova since the inception of the fishery	72
Figure 14. Tanner crab length frequencies from commercial catch landed in Cordova, 1971 - 1975	76
Figure 15. Herring catch from Prince William Sound from inception of the fishery to 1975	80
Figure 16. 1975 herring spawning areas, Valdez Arm	82
Figure 17. 1975 herring spawning areas, Green Island	83
Figure 18. Eastern district Prince William Sound herring age composition 1973 - 1975	84
Figure 19. Montague district Prince William Sound herring age composition 1973 - 1975	85

PREFACE

This is the sixteenth annual management report since the State assumed control of the fisheries in 1960. The 1975 data is preliminary and will be finalized and corrected in subsequent reports. Data presented here supercedes information presented in previous management reports.

Persons desiring additional information should direct a specific request to the area office in Cordova.

CORDOVA COMMERCIAL FISHERIES MANAGEMENT AREA

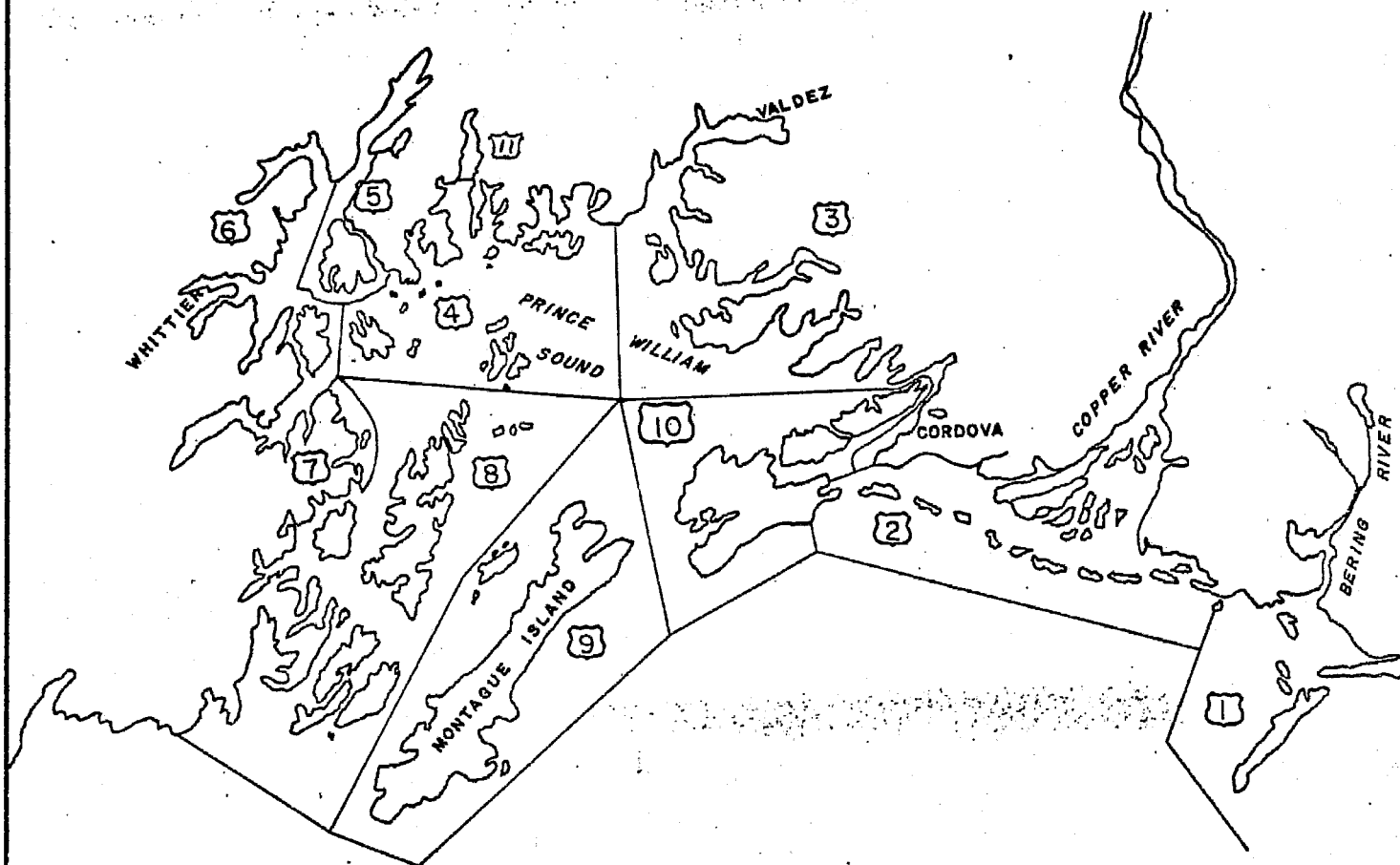


Figure 1: FISHING DISTRICTS

- | | |
|-----------------|------------------|
| 1. Bering River | 6. Northwestern |
| 2. Copper River | 7. Eshamy |
| 3. Eastern | 8. Southwestern |
| 4. Northern | 9. Montague |
| 5. Coghill | 10. Southeastern |
| | 11. Unakwik |

INTRODUCTION

This is the sixteenth annual commercial fisheries management report since the State assumed control of the fisheries in 1960.

The report gives a brief description of the 1975 fishery and summarizes historical catch, escapement and related data on each species harvested by the commercial fishery. The report is compiled primarily for use as a reference source for management purposes.

The Prince William Sound Area comprises all of the drainages entering the Gulf of Alaska between Cape Suckling and Cape Fairfield. The area includes Controller Bay (Bering River), Copper River, Prince William Sound and several small rivers and streams entering the Copper River delta and the Gulf of Alaska (Figure 1).

The economy of the Prince William Sound communities depends primarily on the commercial fishery and related activities. However, the Trans-Alaska oil pipeline terminus and related work provided a considerable impact to the Valdez area economy in 1975 and will continue to provide a basic income to the community for many years.

The base of the major fishery activity is Cordova, and to a lesser extent, Valdez and Whittier.

Fisheries of the area harvest five species of salmon, three species of crab, herring, herring spawn on kelp, halibut, razor clams, shrimp and miscellaneous bottom fish. Salmon is the most important fishery resource harvested, and in 1975 contributed 74.2 percent of the total fishery value to fishermen (Figure 2). The average annual wholesale value of all fishery products from the Prince William Sound area in 1975 was approximately \$17,958,290. The value to fishermen of fish and shellfish caught in the area in 1975 was \$10,207,928.

Three types of salmon net gear are used to harvest salmon from the area. Drift gill nets are the most numerous and are used in the Bering River, Copper River, Eshamy, Coghill and Unakwik management districts. Purse seines are second in abundance and are fished in all districts of Prince William Sound except Eshamy. A small number of set gill nets are fished in the Eshamy district. Salmon troll gear was removed from the legal gear for Prince William Sound Area on March 9, 1974.

The crab species and some large shrimp are caught in pot gear. Some bottom fish and shrimp are taken with trawls. Long lines are used to catch halibut.

In 1975 four major canneries and seven smaller operations processed salmon in the area. Two of the major operations custom canned or processed salmon for two other operations. Three major operators processed king, tanner and Dungeness crab. Eleven operators processed herring, and eleven processed herring spawn on kelp. Table 1 lists fishery operators for the Prince William Sound Area.

A staff of five biologists, one technician, and approximately 25 seasonal aides conduct the research and management programs of the Prince William Sound fishery.

Table 1. Fishery operators, Prince William Sound Area, 1975.

Name, Executive, Address, Location of Operation	Size of Cans Lines of Machinery	Type of Product
Alaska Packers Association <u>1</u> / Merle Wickett, Superintendent P. O. Box 330 Cordova, AK 99574		Salmon
Bayside Cold Storage Fred Pettingill, Superintendent P. O. Box 636 Cordova, AK 99574		Salmon, Halibut, Herring (bait)
Bergit Fishing Company Isobel Samuelson, Superintendent P. O. Box 936 Cordova, AK 99574		Herring Spawn on Kelp
Blake's Canning Robert Blake, Superintendent P. O. Box 94 Cordova, AK 99574	6 1/2 oz. Hand Pack	Salmon
Clams, Inc. Phillip Leshner, Superintendent Cordova, AK 99574		Razor Clams, Fresh & Frozen
Chatham Fisheries P. O. Box 731 Seward, AK 99664		Herring
Denton Sherry 17221 Palatine Avenue North Seattle, WA 98133		Salmon
Engstrom Brothers P. O. Box 723 Juneau, AK 99811		Salmon
Fairmount Island Seafoods 1020 M Street Anchorage, AK 99501		Herring Spawn on Kelp
Mutt Foster		Herring Spawn on Kelp

Table 1, cont. Fishery operators, Prince William Sound, 1975.

Name, Executive, Address, Location of Operation	Size of Cans Lines of Machinery	Type of Product
Glacier Packing Company Percy Conrad, Superintendent P. O. Box 176 Big Point via Cordova	6 1/2 oz. 7 1/2 oz. One Line	Salmon
LeRoy Harris & Company P. O. Box 1062 Cordova, AK 99574		King Crab, fresh market
Honkola Fisheries Sven Honkola, Superintendent P. O. Box 611 Cordova, AK 99574		Salmon, Herring Spawn on Kelp
Johnson Fish Company Eric Johnson, Superintendent P. O. Box 460 Cordova, AK 99574		Bottom Fish, bait
Jarvis Jones P. O. Box 241 Valdez, AK 99686		Shrimp
Kodiak King Crab Howard Anderson, Superintendent P. O. Box 457 Kodiak, AK 99615		Herring
Laddie Enterprises Dick Williamson, Superintendent P. O. Box 1029 Cordova, AK 99574		King & Tanner Crab, fresh market
M S P, Company Peter Ochs & Ross Mullins, Owners P. O. Box 436 Cordova, AK 99574		Herring Spawn on Kelp
Marine Trading, Ltd. Denton Sherry, Superintendent 17221 Palatine Avenue North Seattle, WA 98133		Salmon
Eugene McLeod General Delivery Valdez, AK 99868		Shrimp

Table 1, cont. Fishery operators, Prince William Sound Area, 1975.

Name, Executive, Address, Location of Operation	Size of Cans Lines of Machinery	Type of Product
Mokuhana Fisheries, Inc. Ivan Reiten, Superintendent 2360 West Commodore Way Seattle, WA 98199		Herring Spawn on Kelp
Morpac, Inc. Jack N. Miller, Superintendent P. O. Box 683 Cordova, AK 99574	1/2 lb. - one 1 lb. - one	Salmon, Herring, Dungeness, Tanner & King Crab, Razor Clams (bait)
Richard Newby 2510 Aspen Drive Anchorage, AK 99503		Herring Spawn on Kelp
New England Fish Company James Forsell, Superintendent P. O. Box 120 Cordova, AK 99574	1/4 lb. - one 1/2 lb. - two 1 lb. - two	Salmon
North Coast Seafood Processors, Inc. James Nagai, Superintendent P. O. Box 645 Homer, AK 99603		Herring, Herring Spawn on Kelp
North Pacific Processors, Inc. Kenneth Roemhildt, Supt. P. O. Box 1040 Cordova, AK 99574	1/4 lb. - one 6 1/2 oz. - one 1/2 lb. - one 1 lb. - one	Salmon, Salmon Eggs, Halibut, Dungeness, Tanner & King Crab, Bottom Fish & Razor Clams (bait)
Odiak Smokeries Jean Dettinger, Superintendent P. O. Box 153 Cordova, AK 99574	3 1/4 oz. 6 1/2 oz. Hand Pack	Salmon
Pelican Cold Storage Bruce Mitchell, Superintendent P. O. Box 601 Pelican, AK 99832		Salmon
Peter Pan Seafoods, Inc. 2/ Les Maxwell, Representative 1220 Dexter Horton Building Seattle, WA 98104		Salmon
R. Lee Seafoods, Inc. Marion Harpole, Superintendent Route 2 Soldotna, AK 99669		Herring

Table 1, cont. Fishery operators, Prince William Sound Area, 1975.

Name, Executive, Address, Location of Operation	Size of Cans Lines of Machinery	Type of Product
St. Elias Ocean Products James Poor, Superintendent P. O. Box 548 Cordova, AK 99574	1/4 lb. - one 1/2 lb. - one 4 lb. - one	Salmon, Dungeness, Tanner and King Crab, Halibut, Shrimp, Razor Clams (bait)
Seward Fisheries, Inc. Ralph Hoard, Superintendent P. O. Box 516 Seward, AK 99664		Salmon, Halibut, Tanner Crab, Herring, Herring Spawn on Kelp
Seward Marine Services, Inc. M. Anderson, Superintendent P. O. Box 335 Seward, AK 99664		Herring
Smith & Kirkman Ken Kirkman, Superintendent P. O. Box 962 Cordova, AK 99574		Herring Spawn on Kelp
Connie Taylor P. O. Box 969 Cordova, AK 99574		Shrimp, bottom fish
Trans Pacific Kelp Perry Nicholoff, Superintendent P. O. Box 922 Cordova, AK 99574		Herring Spawn on Kelp
Whitney-Fidalgo Seafoods Robert Summers, Superintendent P. O. Box 670 Cordova, AK 99574		Salmon, Halibut, Bottom Fish, Herring Spawn on Kelp, Herring
Daniel C. York 6553 6th NW Seattle, WA 98117		Herring Spawn on Kelp

1/ Morpac, Inc. customed packed for Alaska Packers Association.

2/ St. Elias Ocean Products customed packed for Peter Pan Seafoods.

ECONOMIC CONDITIONS

The primary economy of the Prince William Sound Area has been the fishing industry for many years. Recent development in oil and gas is rapidly changing the full dependence on the fish resources. The selection of the North Slope oil line terminus at Valdez has drastically changed the economic picture of that Prince William Sound community. Other Prince William Sound communities, although benefiting from oil development to some degree, have remained relatively unchanged, and the economy, especially of Cordova, fluctuates almost directly with the fishing success.

The overall economic picture was a substantial gain to fishermen over 1974 due to the increased salmon catches although price per pound of all species except coho was less in 1975. Price reductions in 1975 were as follows: king salmon from 73.5¢ per pound in 1974 to 67.2¢ in 1975; sockeye salmon from 70¢ to 47.6¢; pink salmon from 41¢ to 30¢; chum salmon from 46¢ to 24.5¢; and coho salmon remained unchanged at 65¢ per pound.

Herring fishermen suffered a huge loss when prices were reduced from \$180 per ton in 1974 to \$90 per ton in 1975. With the catch being at about the same level as 1974, the fishermen received about one-half of what they received for the 1974 catch. The herring spawn on kelp fishermen fared better and received an increase of about 1.7¢ per pound more in 1975. The price of herring spawn on kelp increased from 65.8¢ to 67.5¢ per pound.

Prevailing prices paid for shellfish per pound were the same as 1974 at 20¢ for tanner crab; an increase of 10¢ for Dungeness crab from 45¢ to 55¢; the same for king crab at 45¢; and 10¢ per pound less for razor clam from 60¢ in 1974 to 50¢ in 1975. Figure 2 shows the percentage value distribution of fish and shellfish paid to fishermen in 1975.

A fair to good economic condition exists at the present time as indicated by the continuing trend of upgrading of the fishing fleet with the addition of several new vessels. The fishing fleet is continuing to diversify by engaging in salmon, crab and herring fishing. Prices for all items are continuing to climb, and reflect the continuing inflationary trend and the shift from mostly canned products to frozen products which require less labor and demand higher prices. Table 2 shows the salmon product by species for 1975.

Table 3 shows comparative catch value per fisherman by district for the years 1970 to 1975. Average catch per fisherman shows a general increase in each district for most species from the previous year, except chum salmon in the Coghill-Unakwik District, sockeye in the Copper River District and coho in the Bering River District.

A summary of salmon gear operated in the Prince William Sound Area from 1960 to 1975 is presented in Table 4. Significant changes in effort is shown in the purse seine fishery because the general purse seine fishery was closed in 1974 and reopened in 1975. Reduction of effort occurred in the Coghill and Unakwik drift gill net fishery and the Copper River sockeye drift gill net fishery. Other fisheries show increased effort with the most notable being the Bering River sockeye drift gill net fishery.

The 1975 wholesale value of all fishery products from the Prince William Sound Area is presented in Table 54.

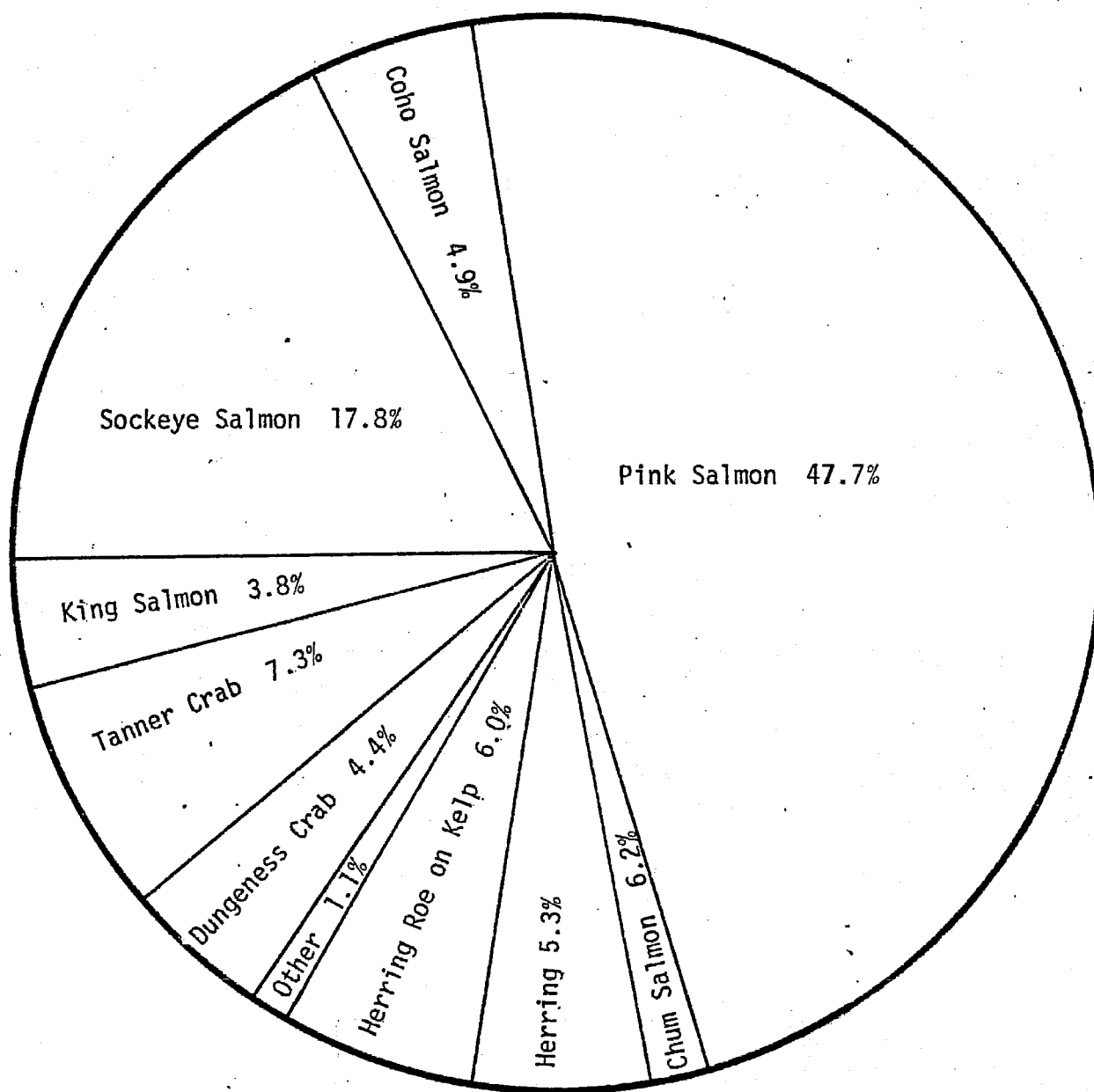


Figure 2. Percentage value to fishermen of fish and shellfish harvested from the Prince William Sound Area, 1975.

Table 2. Prince William Sound Area case pack and pounds of frozen salmon, by species, by week, 1975. 1/

Week	Kings		Sockeye		Cohos		Pinks	Chums	
	Pounds Frozen	Cases	Pounds Frozen	Cases	Pounds Frozen	Cases	Cases	Pounds Frozen	Cases
21	1672	17	2533	2					
22	22253	18	3250	41					
23	96978	48	31369	2588					17
24	103318		83742	3784			2		40
25	20168	69	81564	3449		3	10		119
26	44989	14	131133	4073		2	49		355
27	1850	17	83905	3829		32	304	14545	573
28	1432		111583	3643		6	4293	21549	834
29	914		15542	1699		53	24991	1721	2646
30	183		443	736		72	33350		
31				292		199	38724		1177
32				145		83	26630		458
33	No pack								
34						158	705		24
35					240863	242			
36 <u>2/</u>			3477	145	323716	404	4300	25339	23
TOTAL	293657	183	553541	24281	564579	1254	133358	63154	6266

1/ From reports of processors. Frozen salmon reported in raw weight and cases on the basis of 48 one pound cans.

2/ North Pacific Processors' final report received after case pack data sent to Juneau. Increase in the pack over the previous week does not represent pack for the week ending September 7.

Table 3. Average salmon catch and catch value per fisherman, 1970 - 1975.

Year	Average Value 1/ Per Fisherman	Average Catch					District
		King	Sockeye	Coho	Pink	Chum	
1970	\$1,834	7	174	37	10,917	856	Prince William Sound <u>2/</u>
1971	2,827	3	111	82	22,973	1,610	
1972		CLOSED TO PURSE SEINES					
1973	5,349	*	11	1	2,324	731	
1974		CLOSED TO PURSE SEINES					
1975	5,783	7	129	25	20,030	278	
1970	970	*	266	2	640	105	Coghill - Unakwik <u>3/</u>
1971	1,022	4	483	4	1,079	706	
1972	2,323	*	742	1	48	98	
1973	3,844	*	383	*	1,766	1,123	
1974	3,363	1	334	*	495	181	
1975	3,729	5	658	*	1,030	172	
1970	2,499	*	689	23	1,773	225	Eshamy <u>4/</u>
1971		CLOSED TO PURSE SEINES					
1972	2,399	*	588	13	504	290	
1973	4,145	1	351	3	458	586	
1974	3,888	*	97	*	1,449	147	
1975		CLOSED					
1970	7,179	48	2,772	623	*	*	Copper River
1971	5,756	37	1,415	474	4	11	
1972	5,776	53	1,725	426	5	2	
1973	6,946	47	773	494	*	*	
1974	8,281	42	1,357	104	22	1	
1975	6,553	55	938	354	*	2	
1970	3,441	*	521	885			Bering River
1971	4,497	2	634	1,530			
1972	1,810	1	543	320	*	*	
1973	7,751	2	325	1,037	*	*	
1974	3,906	*	86	584	*	*	
1975	4,183	2	313	514			

* Less than one fish.

1/ Rounded to nearest dollar.2/ Catch is average catch per boat. Value per fisherman based on an average of 3 fishermen per boat (one share to the boat).3/ Includes both purse seines and drift gill nets.4/ Includes both drift gill net and set gill net.

Table 4. Summary of salmon gear operated, 1960 - 1975. 1/

Year	Prince William Sound		Copper River Drift Gill Nets 2/		Bering River Drift Gill Nets 2/	
	Purse Seines	Gill Nets 2/	Sockeye Season	Coho Season	Red Season	Coho Season
1960	223	CLOSED	59,400	34,050	9,900	8,400
1961	102	3,750 Coghill	50,550	25,650	6,450	4,650
1962	237	4,200 Eshamy 3/ 8,550 Coghill	59,100	27,450	9,900	4,500
1963	281	3,750 Eshamy 3/ 3,450 Coghill	61,650	37,950	8,250	8,250
1964	154	8,850 Coghill	43,350	30,900	4,800	6,300
1965	208	3,900 Coghill	50,100	26,850	1,950	9,300
1966	181	6,150 Eshamy 3/ 8,850 Coghill & Unakwik	52,200	30,300	3,600	6,750
1967	207	2,700 Eshamy 3/ 18,000 Coghill & Unakwik	59,100	30,600	6,000	8,250
1968	242	21,750 Coghill & Unakwik	76,650	28,800	4,650	4,650
1969	248	14,250 Coghill & Unakwik	53,400	22,350	4,950	9,900
1970	245	4,350 Eshamy 3/ 19,800 Coghill & Unakwik	60,450	38,850	7,350	13,650
1971	245 *	3,750 Eshamy 3/ 19,350 Coghill & Unakwik	65,400	26,250	8,700	9,450
1972	CLOSED	29,250 Coghill & Unakwik	63,300	36,300	14,100	9,300
1973	211 *	13,500 Eshamy 40,650 Coghill & Unakwik	64,650	40,350	7,200	9,450
1974	44**	7,050 Eshamy 3/ 47,700 Coghill & Unakwik	62,850	15,450	2,550	5,250
1975	213	24,150 Eshamy 3/ 38,250 Coghill & Unakwik	53,700	22,650	8,250	7,050

1/ Peak effort.

2/ Fathoms of gear, weekly effort. Basis of 150 fathoms per fisherman.

3/ Includes set and drift gill nets.

* Actual count. Other years include some duplicates.

** Peak effort, Coghill and Unakwik districts only.

PRICE OF FISH AND SHELLFISH

Fishermen - processor price settlements were still being negotiated when the season opened on the Copper River, and only one processor had signed a price settlement prior to the opening. Price agreements by the one processor were as follows: Cash prices for king salmon, \$0.672; sockeye salmon, \$0.55; pink salmon, \$0.33; and, chum salmon, \$0.33 per pound. Sliding scale prices on basis of case pack price were \$0.45 for sockeye salmon; \$0.3022 for pink salmon; and \$0.3060 for chum salmon. Final prices paid for salmon by the major processors were \$0.672 for king salmon; \$0.476 for sockeye salmon; \$0.16 for Prince William Sound coho salmon; \$0.56 for August coho salmon; \$0.70 for September coho salmon; \$0.30 for pink salmon, and \$0.245 for chum salmon per pound.

Prevailing per pound prices paid for shellfish in 1975 were: tanner crab, \$0.13 (spring) and \$0.20 (fall); Dungeness crab, \$0.55; king crab, \$0.45; and, razor clam, beach weight, \$0.50.

Herring prices averaged about \$90 per ton, and herring spawn on kelp ranged from \$0.65 to \$0.70 per pound.

AVERAGE WEIGHT AND NUMBER OF SALMON PER CASE

The average weight of salmon by major fishery and species is shown in Table 5, and the number of salmon per case is given in Tables 6 and 7. Average weights as depicted in Table 5 were calculated from numbers and weights recorded on fish tickets.

TIME OPEN TO FISHING AND CALENDAR WEEKS

Time open to fishing for salmon is expressed by month, day, gear and regulatory area in Table 8. Fishing time is shown in hours per day with the blanks denoting days closed to commercial fishing.

The calendar weeks shown in Table 9 were used in compiling catch statistics from 1975 landings.

Table 5. Comparative average weights of salmon from the Prince William Sound Area in pounds, by species from the commercial catch. 1/

<u>Year</u>	<u>King</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>
1970	30.3	6.1	9.5	4.0	8.2
1971	24.0	6.6	9.2	3.6	7.2
1972	29.7	6.3	7.3	4.3	8.7
1973	33.6	7.2	9.4	4.0	9.6
1974 <u>2/</u>	33.4	6.8	9.1	4.7	7.9
1974 <u>3/</u>	13.3	7.3	8.2	4.7	9.0
1975 <u>4/</u>	26.22	7.05	9.27	3.65	7.24

1/ Data from Alaska Catch and Production Commercial Fisheries Statistics, Statistical Leaflets unless otherwise noted.

2/ Copper River and Bering River districts.

3/ Prince William Sound districts.

4/ Preliminary data from stat run.

TABLE 6. Number of salmon per case, 1954 to present.

Prince William Sound

Year	Sockeye	Coho	Pink	Chum
1954	9.5	9.7	16.5 <u>1/</u>	
1955	9.6	9.4	15.0	8.7
1956 <u>2/</u>				
1957	9.8	10.5	17.4	8.5
1958 <u>2/</u>				
1959		CLOSED SEASON		
1960	13.0	13.2	24.4	9.8
1961	10.4	9.0	17.0	9.3
1962	10.93	12.29	24.14	10.71
1963	9.53	7.23	22.89	9.14
1964 <u>4/</u>	13.52 <u>3/</u>	6.89	22.39	8.23
1965 <u>4/</u>	12.69 <u>3/</u>	10.31 <u>5/</u>	25.43 <u>5/</u>	10.23 <u>5/</u>
1966 <u>4/</u>	10.94	8.94	19.57	10.65
1967 <u>6/</u>	11.07	9.21	19.02	9.43
1968 <u>6/</u>	10.72	8.85	21.59	8.68
1969 <u>6/</u>	11.19	8.11	20.86	8.36
1970 <u>6/</u>	11.19	8.11	21.36	9.60
1971 <u>6/</u>	9.90	12.72	21.32	11.36
1972 <u>6/</u>	10.93	8.30	16.15	9.53
1973 <u>6/</u>	9.76	7.52	20.55	8.14
1974 <u>6/</u>	9.34	10.00 <u>7/</u>	16.73	11.35
1975 <u>8/</u>	10.49	8.84	21.75	9.84

1/ Estimated number of salmon per case taken from the average of other years.

2/ The number of salmon per case not separated by area.

3/ Combined pack figure from both Copper River and Prince William Sound.

4/ Data from Parks Canning Company, except in 1965 the pinks are averaged for all canneries.

5/ New England Fish Company reported fish per case as follows: Coho 9.20, pink 24.59, and chum 10.02.

6/ Data from New England Fish Company.

7/ Data from North Pacific Processors.

8/ Data from Morpac, Inc.

TABLE 7. Number of salmon per case, 1951 to present.

Copper and Bering Rivers

Year	King	Sockeye	Coho	Pink	Chum
1951 <u>1/</u>	3.4	11.6	8.1	18.1	9.1
1952	3.4	11.6	8.1	18.1	9.1
1953 <u>2/</u>	3.4	11.1	7.0	16.5	9.1
1954	3.2	11.7	7.5	--	--
1955	3.5	11.5	8.6	--	--
1956 <u>2/</u>	3.6	11.2	8.3	26.0	10.2
1957	3.8	11.6	--	--	--
1958 <u>2/</u>	3.0	11.5	8.3	17.0	9.1
1959	3.2	12.9	8.6	--	--
1960	3.6	13.4	9.3	--	--
1961	3.82	12.0	9.24	17.0	9.3
1962	3.26	11.04	10.92	18.27	11.16
1963	3.08	12.21	7.9	--	--
1964 <u>3/</u>	2.86	13.52	6.89	22.39	8.23
1965 <u>3/</u>	3.17	12.69 <u>4/</u>	10.31 <u>4/</u>	--	--
1966 <u>5/</u>	2.82	11.01	7.60	19.81	10.62
1967 <u>6/</u>	2.71	10.87	10.64	17.55	8.40
1968 <u>6/</u>	2.70	12.20	7.80	21.59	8.68
1969 <u>6/</u>	2.71	11.53	8.17	--	--
1970 <u>6/</u>	2.35	11.95	7.68	21.69	10.05
1971 <u>6/</u>	3.00	10.64	10.83	19.81	15.25
1972 <u>6/</u>		10.93	8.30	16.15	9.53
1973 <u>6/</u>	2.11	10.31	5.96	20.40	8.62
1974 <u>6/</u>	--	10.17	9.14	16.80	10.22
1975 <u>8/</u>	6.475	10.09	9.13	21.14	9.96

1/ Estimated number of salmon per case taken from the average of other years.

2/ The number of salmon per case not separated by area.

3/ Figures from Parks Canning Company combined for both Copper River and Prince William Sound.

4/ Includes some reds and coho from Prince William Sound.

5/ Data from Parks Canning Company.

6/ Data from New England Fish Company.

7/ Data from North Pacific Processors

8/ Data from Morpac, Inc.

Table 8. Time open to salmon fishing by month, day, gear and regulatory area, 1975. 1/

	Copper River	Copper-Bering River	Coghill-Unakwik	Copper-Bering River	Coghill-Unakwik	Prince William Sound	Copper-Bering River	Coghill-Unakwik	Prince William Sound	Copper-Bering River
DAY	M A Y	J U N E		J U L Y			A U G U S T			S E P T E M B E R
1				24	24		21	21		17
2		18		6	24					24
3		24			24					24
4		6			21		18	18		19
5		6					24	24		
6		24					21	21		
7		6		18	18					
8				24	24					
9		18		6	24					
10		24			24					
11		6			21		17			
12		6*	18				24			
13		24	21				24			
14		6		18	18	18	19			
15	6			24	24	24				
16	24	18	18	6	24	24				
17	6	24	24		24	24				
18		6	24		21	21	17			
19	18	6	24				24			
20	24	24	21				24			
21	6	6		18	18	18	19			
22	6			24	24	24				
23	24	18	18	6	24	24				
24	6	24	24		24	24				
25		6	24		21	21	17			
26	18		24				24			
27	24		21				24			
28	6				18	18	19			
29	6				24	24				
30	24	18	18		24	24				
31	6				24	24				
Total open hrs. by month and gear	M A Y	J U N E		J U L Y			A U G U S T			S E P T E M B E R
DGN	204	318	279	174	516		252	84		84
SGN										
PS		279		516	312		84			

1/ Time open to fishing expressed in hours per day. Blanks denote days closed to fishing.

* Bering River did not open until June 12.

Table 9. Calendar weeks, 1975. 1/

<u>Week</u>	<u>From</u>	<u>Thru</u>	<u>Week</u>	<u>From</u>	<u>Thru</u>
1	Jan. 1	Jan. 4	28	July 6	July 12
2	5	11	29	13	19
3	12	18	30	20	26
4	19	25	31	27	Aug. 2
5	26	Feb. 1	32	Aug. 3	9
6	Feb. 2	8	33	10	16
7	9	15	34	17	23
8	16	22	35	24	30
9	23	March 1	36	31	Sept. 6
10	March 2	8	37	Sept. 7	13
11	9	15	38	14	20
12	16	22	39	21	27
13	23	29	40	28	Oct. 4
14	30	April 5	41	Oct. 5	11
15	April 6	12	42	12	18
16	13	19	43	19	25
17	20	26	44	26	Nov. 1
18	27	May 3	45	Nov. 2	8
19	May 4	10	46	9	15
20	11	17	47	16	22
21	18	24	48	23	29
22	25	31	49	30	Dec. 6
23	June 1	June 7	50	Dec. 7	13
24	8	14	51	14	20
25	15	21	52	21	27
26	22	28	53	28	31
27	29	July 5			

1/ Used for 1975 catch statistics.

BERING RIVER DISTRICT

INTRODUCTION

The Bering River district is located between Cape Martin and Cape Suckling. Salmon harvested in this area normally spawn in streams and rivers emptying into Controller Bay. The Bering River - Bering Lake system is the main salmon producing area of the district. Sockeye and coho are the primary species harvested.

Weekly fishing periods for sockeye salmon are divided into two fishing periods and two closed periods which total three and one-half days each. Fishing during the coho salmon season is allowed five days per week.

Sockeye Salmon

The commercial drift gill net fishery opened in this district on June 12 at 6:00 p.m. During the first 36 hour period 20 boats landed 3,068 sockeye salmon. At the opening of the second period fishing effort increased to 54 boats, and the catch also increased to 16,405 sockeye salmon. Fishermen continued to fish the area for two more weeks catching a season total of 21,637 sockeye salmon which was comparable to the 21 year average. Tables 10 and 13, and Figure 3 give catch and escapement statistics from 1965 to 1975.

Coho Salmon

The Bering River district fishery opening coincided with the opening of the Copper River district and was also delayed by price negotiation.

During the two week season 24,162 cohos were harvested, Table 12. The 21 year average catch is 52,344, Table 13. Early escapements were poor, and an influx of gear from the Copper River District was anticipated, so an overall closure of both districts was necessary to assure an adequate spawning escapement. Figure 4 shows the commercial catch and escapement from 1965 to 1975.

King Salmon

The total season catch of 162 is shown in Table 11 while Table 13 gives yearly catches since 1955.

Escapements

Sockeye salmon escapement surveys of Bering River spawning streams left much to be desired. Survey conditions during most of the season were poor, and many normally clear spawning streams were higher than normal and carried increased silt loads. However, indications from clear spawning streams gave evidence of below average escapements. Table 14 shows comparable escapements, 1969 - 1975.

Coho salmon escapements were very poor and necessitated the closure of this fishery. Aerial surveys of this district after the fishery closure gave very little indication of improvement.

Table 10. Bering River sockeye salmon weekly catch, 1975.

Week No.	Total Catch	Total Pounds	Average Wt./Fish	Number Boats <u>1/</u>	Average No. Fish/Boat
24	3,068	21,272	6.93	20	153
25	16,405	110,015	6.71	54	304
26	1,791	11,489	6.42	15	119
27	373	2,347	6.29	6	62
TOTAL	21,637	145,123	6.71		

Table 11. Bering River king salmon weekly catch, 1975.

Week No.	Total Catch	Total Pounds	Average Wt./Fish	Number Boats <u>1/</u>	Average No. Fish/Boat
24	29	482	16.62	20	2
25	115	3,131	27.23	54	2
26	16	475	29.69	15	1
27	2	60	30.0	6	-
TOTAL	162	4,148	25.6		

Table 12. Bering River coho salmon weekly catch, 1975.

Week No.	Total Catch	Total Pounds	Average Wt./Fish	Number Boats <u>1/</u>	Average No. Fish/Boat
35	8,158	70,725	8.67	36	227
36	16,004	152,387	9.52	47	341
TOTAL	24,162	223,112	9.23		

1/ 150 fathoms drift gill net per boat.

Table 13. Bering River drift gill net salmon catch, 1955 - 1975.

<u>Year</u>	<u>King</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>
1955 <u>1/</u>	125	34,121 <u>2/</u>	70,100	50	2
1956	147	41,437	53,484	46	5
1957	71	29,142	27,441	27	22
1958	72	23,947	21,202	32	1
1959	77	27,384	58,560	6	0
1960 <u>3/</u>	63	32,890	70,065	126 <u>4/</u>	6 <u>4/</u>
1961	872	60,116	50,883	30	1
1962	246	72,230	55,502	0	2
1963	95	23,127	88,610	60	0
1964	36	13,469	78,708	0	0
1965	3	10,651	52,114	0	32
1966	36	24,949	49,818	0	1
1967	20	11,866	46,138	3	2
1968	10	26,136	67,134	199	0
1969	44	38,093	4,033	1	0
1970	26	23,539	79,264	1	1
1971	105	36,776	88,231	4	0
1972	107	51,445	19,825	3	1
1973	285	15,426	65,348	2	5
1974	32	4,208	28,615	7	1
1975	162	21,637	24,162	0	0
<hr/>					
TOTAL	2,634	622,599	1,099,237	597	82
<hr/>					
AVERAGE	125	29,648	52,344	28	4
<hr/>					

- 1/ From 1955 to 1959, data is from Robert R. Simpson, Alaska Commercial Salmon Catch Statistics, 1951 - 1959, Statistical Digest No. 50.
- 2/ Data is from Manuscript Report, 1964, "The Red Salmon of Copper River, Alaska", Seton H. Thompson.
- 3/ From 1960 to 1975, data is from Alaska Department of Fish and Game Statistical Leaflets.
- 4/ From 1960 to 1961, data is from INPEC.

Figure 3. Bering River sockeye salmon catch and escapement.

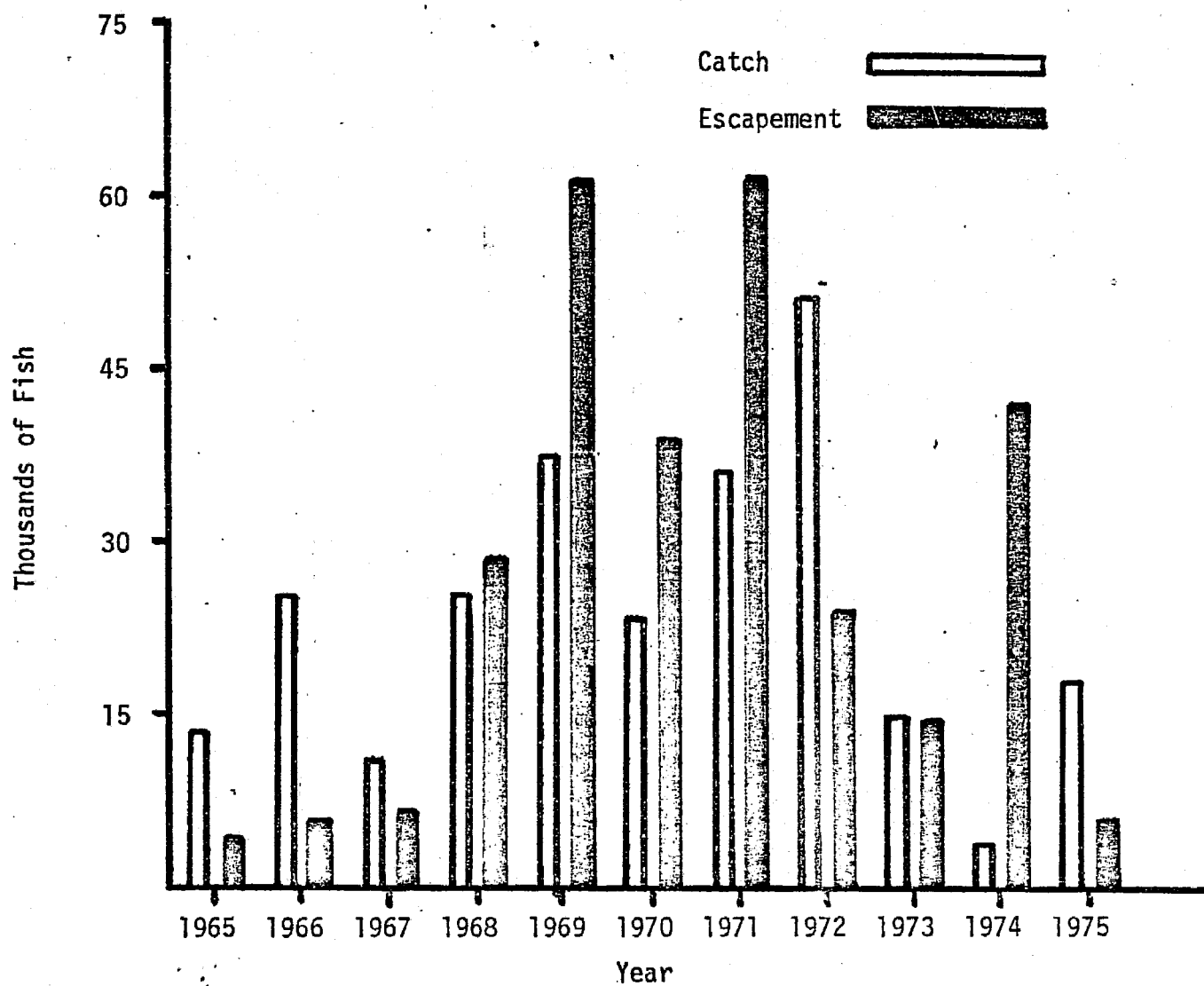


Figure 4. Bering River coho salmon catch and effort.

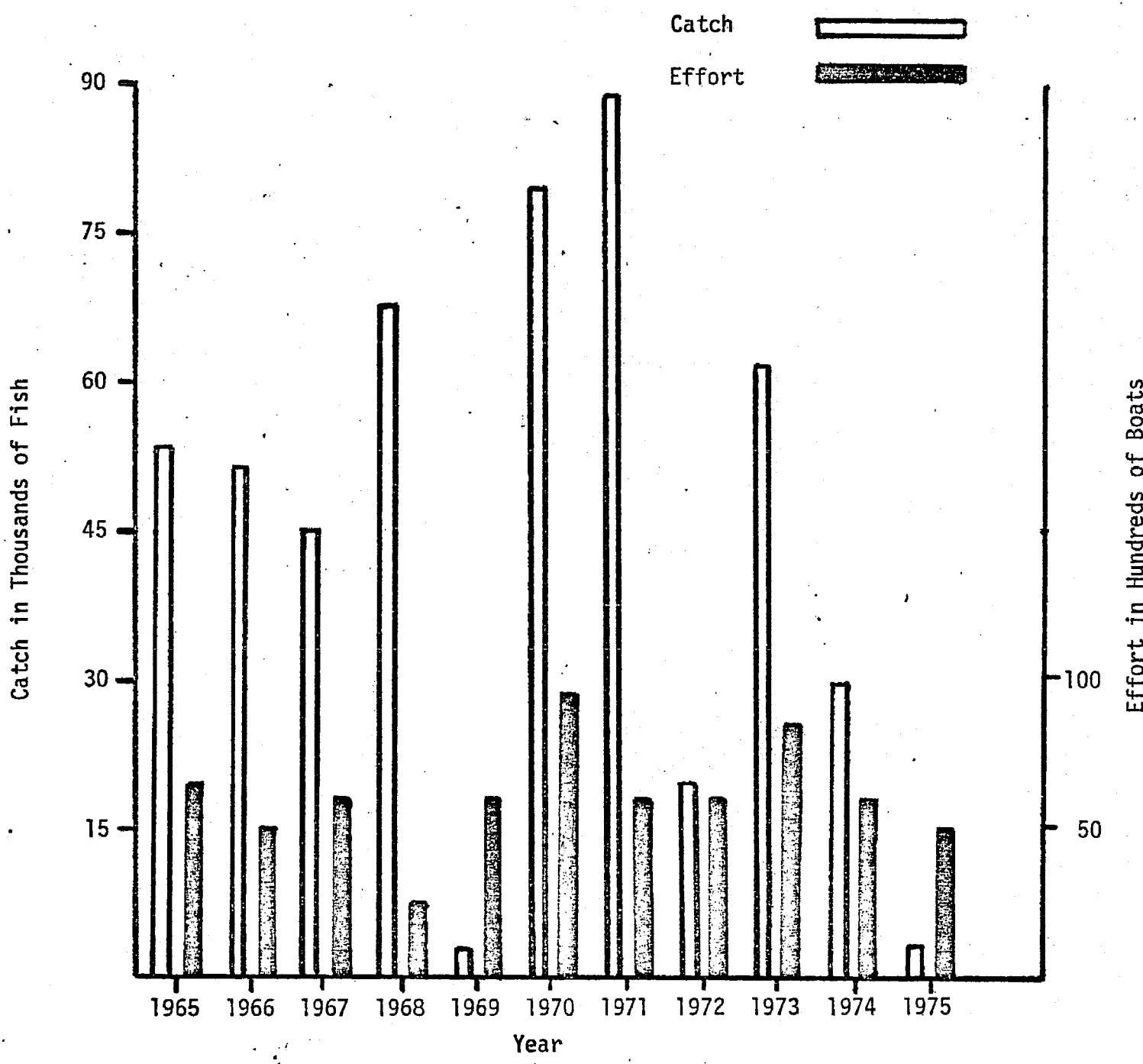


Table 14. Comparable estimated sockeye salmon spawning escapements on selected systems, Copper River - Bering River districts, 1969 - 1975. 1/

System	1969	1970	1971	1972	1973	1974	1975
Eyak Lake	21,000 ^{2/}	28,366 ^{2/}	5,800	12,275	6,000	4,625	17,500
McKinley Lake	500	5,000	1,700	600	1,800	2,000	8,000
39 Mile Creek	3,000	5,997	8,270	14,910	5,511	2,400 ^{4/}	2,500
Lake Tokun	700	19,764	23,000	1,850	3,455	1,462 ^{4/}	1,200 ^{5/}
Little Martin Lake	400	0	3,000	3,000 ^{3/}	1,500	1,500	2,000
Martin Lake	1,500	600	4,500	6,500 ^{3/}	2,000	1,500	460
Martin River Slough	4,000	4,450	5,000	5,000	1,990	5,000	400
Copper Delta Subtotal	31,100	64,177	51,270	44,135	14,456	18,493	32,060
Bering Lake	47,000	20,000	21,675	20,000	23,000	20,575	4,000
Dick Creek	15,000	13,500	30,000	16,000	9,600	6,600	1,970
Shepherd Creek	6,000	6,000	10,200	6,000	3,000	15,000	150
Bering River Subtotal	68,000	39,500	61,875	42,000	35,600	42,175	6,120
Mentasta Lake	3,318	4,958	3,195	1,450	6,196	700	450
Gulkana River	1,682	3,700	2,000	1,280		15,780	0
St. Anne Creek	4,300	18,300	29,903	1,900	7,400	2,100	499
Mahlo River	750	8,631	14,481	1,525	4,500	500	314
Mendeltna Creek	6,805	4,700	870	2,404	2,868	332	325
Upper Copper River Subtotal	16,855	40,289	50,449	8,559	20,964	19,412	1,588
TOTALS	115,955	143,966	163,594	94,694	71,020	80,080	39,768

1/ Peak count estimates from aerial and ground counts unless otherwise noted.

2/ From sonar counter.

3/ Includes 1,500 at mouth of Martin River.

4/ Weir count.

5/ Weir count was 329 sockeye.

COPPER RIVER DISTRICT

INTRODUCTION

The Copper River District includes all waters of Hinchinbrook Island between Hook Point and Boswell Rock including Boswell Bay waters south of a line from Boswell Rock to the radio tower at Whitshed Village, and waters between Whitshed village and Point Martin.

The commercial salmon fishery opens on May 15, and is one of the earliest opening salmon net fisheries in the State. Sockeye salmon and coho salmon are the primary species harvested in this fishery although king, chum and pink salmon are taken incidentally.

The sockeye salmon season is regulated by a weekly series of equal fishing and nonfishing periods. The weekly fishing period opens at 6:00 a.m. Monday and closes at 6:00 a.m. Wednesday, and is reopened at 6:00 p.m. Thursday and closes again at 6:00 a.m. Saturday. After August 7 fishing is permitted from 6:00 a.m. Monday until 6:00 p.m. Thursday of each week. In all, a total of three and one-half days a week are fished. A total of 150 fathoms of drift gill net is allowed to be fished by each fishing boat.

Sockeye Salmon

The Copper River commercial fishery opened as scheduled on May 15. Fishermen - processor price settlements were still being negotiated, and only one processor had signed a price agreement prior to the opening.

During the opening period of one and one-half days fishermen were on a fish limit because of limited tender capacity, and a small catch of 6,698 sockeye salmon was taken. Effort was small during the first period with only 109 boats participating in the fishery.

By the end of week 22 (May 31) all processors had signed the price agreement, and fish limits were lifted. During the week of June 1 - 7, 430 boats fished this district, but the sockeye catch was below the parent year catch and below the 15 year average. Catch per unit of effort did not improve over the next two weekly fishing periods, and on June 25 fishing time was decreased to 48 hours per week.

With the opening of the Coghill - Unakwik District fishery effort decreased to 270 boats and continued to drop until the season was closed by emergency order on July 28 when 27 boats were fishing the area.

The seasonal total catch of 335,687 sockeye salmon was the second lowest catch recorded in the past 15 years, Table 18.

Figure 5 shows catch and escapement of sockeye salmon for this fishery for the past 10 years, while Table 15 presents commercial catch statistics for this season.

King Salmon

King salmon are taken incidental to the sockeye fishery primarily with standard 5 3/8 inch sockeye salmon gear.

During the season 19,644 king salmon were harvested which was approximately 4,500 fish above the 15 year average, Tables 16 and 18.

Coho Salmon

The coho salmon season was opened by emergency order on August 11. However, fishermen - processor price agreements had not been reached and actual fishing did not commence until August 25.

Regulatory action by the Board of Fish and Game in the fall of 1974 reduced fishing in the Copper River District from five days a week to three and one-half days a week, opening at 6:00 a.m. Monday and closing at 6:00 p.m. Thursday.

The catch of 20,139 coho salmon during the first period was approximately 3,000 fish below the 14 year average.

During the next weekly fishing period it was apparent that catches were decreasing drastically, and by the end of the fishing period were 27,000 cohos below the 14 year average. Because of the drastic decrease in catch the season was closed by emergency order on September 4 at 7:00 p.m. with a season catch of 53,502 cohos.

Table 17 presents commercial catch and effort data for this fishery. Table 18 gives catches from 1960 - 1975 while Figure 6 shows catch and escapement of coho salmon from 1965 to 1970.

Subsistence Fishery

A limited salmon subsistence fishery with dip nets and fishwheels is allowed on the upper Copper River and in the Prince William Sound Area with gill nets and purse seines. In 1975 the upper river catch totaled 13,320 sockeye and 1,705 kings. Four sockeyes were reported taken on the Copper River flats and five from Prince William Sound using drift gill net gear. Table 19 presents the subsistence catch data for 1975.

Escapement

Escapement estimates are derived primarily from aerial and ground counts. Two weirs have been installed on two delta spawning systems, and one counting tower is used on one system in the upper Copper River area. Sockeye salmon escapements improved after the closure, and three of the six major producing systems did receive above average spawning levels. Tables 14, 20 and 21 present escapement estimates of index streams. Figure 5 graphs escapement levels from 1965 to 1975.

Comparative annual coho salmon escapement estimates are difficult to obtain. Adverse weather during this time of the year in the form of heavy rain, swells and silty streams giving minimal counts, and high winds prevent many aerial survey attempts.

In 1975 early escapement counts were poor, but escapement levels improved after the fishery closed resulting in what may be considered a fair overall escapement. Figure 6 shows catch and escapement levels in graph form from 1965 to 1975.

Age Composition

Age class contribution by sex and week for sockeye salmon is given in Table 22. Table 23 presents age composition and mean length by sex of king salmon sampled in the Copper River commercial catch.

Table 15. Copper River sockeye salmon weekly catch, 1975.

Week No.	Total Catch	Total Pounds	Average Wt./Fish	Number Boats ^{1/}	Average No. Fish/Boat
20	6,698	43,381	6.48	109	61
21	77,303	505,788	6.54	335	231
22	59,726	401,152	6.72	347	172
23	52,757	354,083	6.71	430	123
24	64,874	431,376	6.65	351	185
25	32,223	212,523	6.60	270	119
26	16,945	111,422	6.68	129	131
27	11,949	78,809	6.70	102	117
28	6,392	41,802	6.54	68	94
29	2,991	18,816	6.29	20	150
30	3,823	24,028	6.29	27	142
31-34	CLOSED				
35	6	35	6.0	167	*
<hr/>					
TOTAL	335,687	2,223,215	6.55		

Table 16. Copper River king salmon weekly catch, 1975.

Week No.	Total Catch	Total Pounds	Average Wt./Fish	Number Boats ^{1/}	Average No. Fish/Boat
20	162	3,978	24.6	111	2
21	2,187	55,798	25.5	335	7
22	4,898	125,982	24.4	347	14
23	5,834	159,959	27.4	430	14
24	3,941	117,900	29.9	351	11
25	1,938	61,450	31.7	270	7
26	507	16,349	32.3	129	4
27	118	3,775	32.0	102	1
28	51	1,567	30.0	68	1
29	1	25	25.0	20	*
30	6	165	27.5	27	*
31-34	CLOSED				
35	1	20	20.0	167	*
<hr/>					
TOTAL	19,644	546,968	27.8		

^{1/} 150 fathoms of drift gill net gear per boat.

* Less than one fish per boat.

Figure 5. Copper River sockeye salmon catch and escapement.

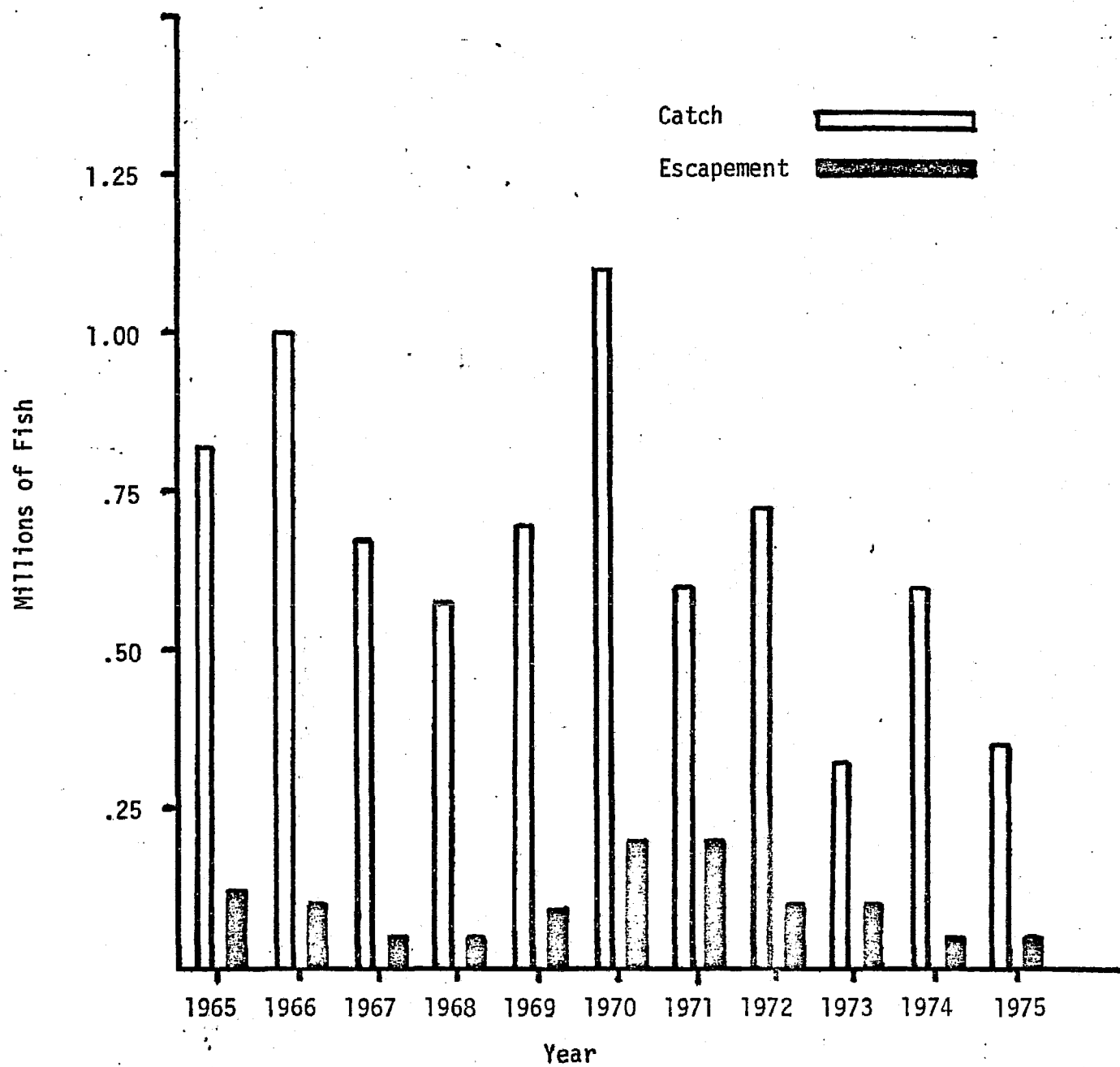


Table 17. Copper River coho salmon weekly catch, 1975.

Week No.	Total Catch	Total Pounds	Average Wt./Fish	Number Boats ^{1/}	Average No. Fish/Boat
24	7	40	5.71	351	*
28	2	15	7.50	68	*
30	1	7	7.00	27	*
35	30,139	270,043	8.95	167	182
36	23,353	234,976	10.06	149	157
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TOTAL	53,502	505,081	9.44		

^{1/} 150 fathoms of drift gill net gear per boat.

Figure 6. Copper River coho salmon catch and effort.

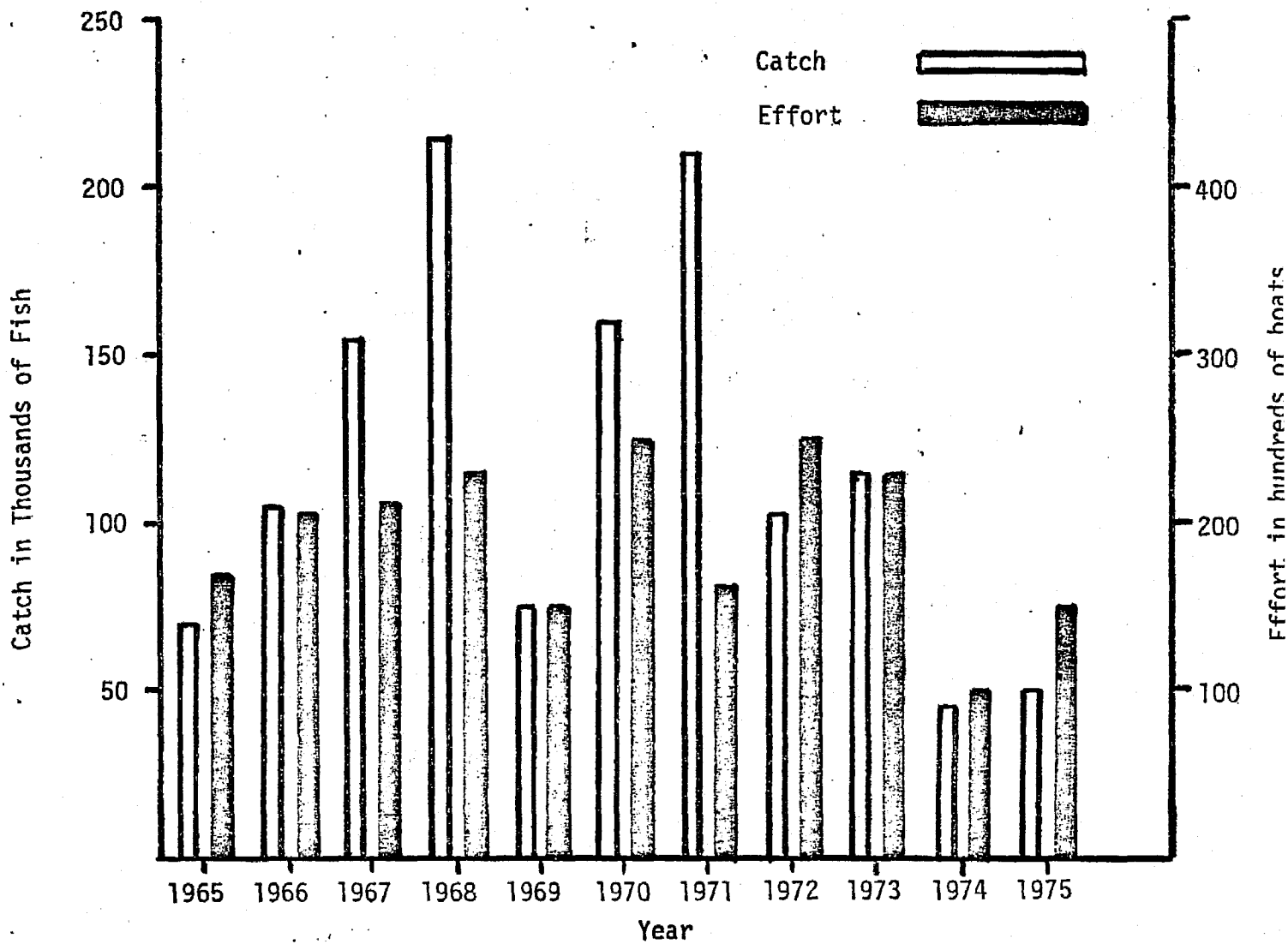


Table 18. Copper River drift gill net salmon catch, 1960 - 1975.

Year	King <u>1/</u>	Sockeye <u>1/</u>	Coho <u>1/</u>	Pink	Chum
1960	8,673	360,667	137,957	375 <u>2/</u>	314 <u>2/</u>
1961	7,621	528,223	133,987	1,639	106
1962	14,792	677,626	174,628	1,880 <u>3/</u>	513 <u>3/</u>
1963	10,871	375,029	202,621	1,487	85
1964	12,751	699,548	242,666	548	62
1965	15,390	818,277	70,786	803	331
1966	11,422	1,005,615	116,147	717	115
1967	9,853	508,327	160,532	573	218
1968	9,743	573,261	230,867	4,343	473
1969	14,040	696,836	77,405	847	244
1970	19,375	1,115,695	161,892	645	687
1971	16,486	616,801	208,915	1,762	5,287
1972	22,349	727,144	103,211	2,304	717
1973	19,948	332,816	132,272	8,964	10,173
1974	18,980	607,766	46,625	9,839	664
1975	19,644	335,687	53,502	236	807

TOTAL	231,983	9,979,318	2,254,013	36,962	20,796
AVERAGE	14,496	623,707	140,876	2,310	1,300

1/ Data from Alaska Department of Fish and Game Statistical Leaflets.

2/ From 1960 to 1961, data is from INPEC.

3/ From 1962 to 1975, data is from Alaska Department of Fish and Game Statistical Leaflets.

Table 19. Prince William Sound Area subsistence fishery, 1975.

Area	Number Permits Issued	Number Permits Returned	Type of Gear	Catch			
				Sockeye	Kings	Cohos	Other 2/
Upper Copper River	350	259	Fishwheel	5,626	762		20
Upper Copper River	2,452	2,242	Dip Net	7,694	943		13
Copper River Flats	2	2	Gill Net	4			
Prince William Sound	2	2	Gill Net	5			3
Eyak, Bering and McKinley Lakes 3/	6	5	Gill Net				319
TOTAL	2,812	2,510		13,329	1,705		355

1/ Compiled from reports received through June 8, 1976.

2/ Includes pink salmon, whitefish, steelhead, cutthroat, Dolly Varden, lamprey, lingcod and grayling.

3/ Whitefish permits

Table 20. Estimated sockeye salmon spawning escapements, Copper River delta, 1973, 1974 and 1975.

<u>System</u>	<u>Estimated Escapement</u>		
	<u>1973</u>	<u>1974</u>	<u>1975</u>
Eyak Lake	6,000	4,625	17,500
Hatchery Creek	687	322	700
McKinley Lake	1,800	2,000	8,000
Salmon Creek	2,000	819 <u>3/</u>	2,600
26.6 Mile Creek	600		600
27 Mile Creek	600	250	600
39 Mile Creek	5,511	2,400	2,500
Goat Mountain Creek	2,100	150	400
Pleasant Creek	132	0	25
Deadwood Creek	0	0	0
Tokun Lake	8,000	1,468 <u>1/</u>	1,200 <u>2/</u>
Martin Lake	2,000	1,500	460
Little Martin Lake	1,500	1,500	2,000
Pothole Lake	0	6	3,000
Ragged Point Lake	2,500	2,000	2,500
Martin River Sloughs	1,990	5,000	400
Martin Creeks	<u>5,000</u>	<u>1,500</u>	<u>150</u>
TOTAL	40,420	23,540	42,635

1/ Weir count.

2/ Weir count was 329 sockeye.

3/ Foot survey.

Table 21. Estimated spawning escapement of sockeye and king salmon to upper Copper River, 1975. 1/

<u>Location</u>	<u>Sockeye</u>	<u>King</u>
Bremner River		
Peninsula Lake	0	
Salmon Creek	0	
Steam Boat Lake	0	
Tiekel River Lake	0	
Swan Lake		
Tonsina River		
Lower Tonsina Creek	324	
Little Tonsina River	0	132
Tonsina Lake 3/	250	
Grayling Creek		
Klutina River	3,000	
Manker Creek		
Mahlo Creek	314	
Hallet Slough	30	
Curtis Creek	0	
St. Anne Creek	499	
Tazlina River		
Tazlina Lake		
Kiana Creek		
Mendeltna Creek	325	
Gulkana River		
West Fork	0	627
Moose Creek	0	0
Keg Creek	256	1
Middle Fork	200	91
Dickey Lake	25	
Swede Lake	6	
Hungry Hollow Creek	0	0
East Fork to Paxson Lake	550	22
Paxson Lake	0	0
Paxson Lake Inlet	150	
Paxson Lake to Mud Creek	2,100	
Mud Creek	400	
Mud Creek to Summit Lake	1,200	
Fish Lake	2,800	
Summit Lake	0	0
Gunn Creek	79	
Chistochina River		
East Fork	0	71
Eagle Creek	0	9
Mankomen Lake	0	0
Slana River		
Mentasta Lake	450	
Fish Creek	200	
Bad Crossing #1	0	
Bad Crossing #2	5	
Bone Creek		
Suslota Lake	0	

Table 21, cont. Estimated spawning escapement of sockeye and king salmon to upper Copper River, 1975. 1/

<u>Location</u>	<u>Sockeye</u>	<u>King</u>
Indian River		6
Porcupine Creek		
Sinona Creek		
Ahtel Creek		4
Tanada Creek		
Tanada Lake		
Copper Creek		
Copper Lake		
Lakina River		
Long Lake	375	
Nizina River		
Spruce Point Creek		
Clear Creek	0	
Tana River		
Tana River Clear Channels	0	
Tana Lake Inlet	0	
West Fork (Clear Channels)	60	

1/ Escapement refers to peak survey.

Table 22. Copper River sockeye salmon by age class contribution by sex and week, 1975.

Week	Sample % Catch	1.2		2.2		0.3		1.3		2.3		1.4		Total 3/ 4/
		M	F	M	F	M	F	M	F	M	F	F	F	
20 5/11-5/17	% n	0.9 60	1.4 94	1.7 114	2.0 134	0.3 20	22.8 1,527	35.3 2,364	13.4 898	22.2 1,487	4/ 6,698			
21 5/18-5/24	% n	0.9 693	1.4 1,078	1.7 1,309	2.0 1,540	0.3 231	22.8 17,556	35.3 27,181	13.4 10,318	22.2 17,094	351 77,000			
22 5/25-5/31	% n	3.9 2,329	5.0 2,986	1.4 836	1.1 657	0.4 239	30.0 17,916	38.2 22,813	3.9 2,329	15.7 9,376	280 59,720			
23 6/1 -6/7	% n	5.4 2,849	4.0 2,110	0.4 211	0.9 475	0.9 475	29.2 15,405	46.7 24,637	3.6 1,899	8.1 4,274	223 52,757			
24 6/8 -6/14	% n	2.3 1,492	4.5 2,919	0.3 195	1.9 1,233	0.3 195	26.1 16,932	52.1 33,799	3.5 2,270	8.1 5,254	311 64,874	0.3 195		
25 6/15-6/21	% n	11.6 3,738	4.6 1,482	0.5 161	0.5 161	0.4 129	25.9 8,346	44.9 14,468	2.3 741	7.4 2,385	216 32,223	0.5 161	0.4 129	
26 6/22-6/28	% n	5.5 932	7.4 1,254	1.9 322	1.9 322	0.9 153	22.2 3,762	27.8 4,710	13.9 2,355	17.6 2,982	108 16,945			
27 6/29-7/5	% n	8.8 1,052	11.5 1,374	3.8 454	2.2 263	0.5 60	23.5 2,808	25.2 3,011	10.9 1,302	13.1 1,565	5/ 11,949			
28 7/6 -7/12	% n	13.3 850	17.3 1,106	6.7 428	2.7 173		25.3 1,617	21.3 1,362	6.7 428	6.7 428	75 6,392			
29 7/13-7/19	% n	24.3 727	13.5 404	6.8 204	6.8 203		6.8 203	20.2 604	8.1 242	12.1 362	74 2,991			
30 7/20-7/26	% n	24.3 929	13.5 516	6.8 260	6.8 260		6.8 260	20.2 772	8.1 310	12.1 462	6/ 3,823			
TOTALS	% n	4.67 15,651	4.57 15,323	1.29 4,333	1.62 5,421	.23 776	25.74 86,332	37.49 125,721	6.89 23,092	13.62 45,669	.05 161	.09 324	1,638 335,372	
SEXES COMBINED	% n	9.24 30,974		2.91 9,754		.53 2,097	63.23 212,053		20.50 68,761		.15 485		35	

Table 22. Copper River sockeye salmon catch by age class contribution by sex and week, 1975, (continued).

- 1/ Not shown in Table: Age class 1.1 males: n=161, %=0.5 in week 25; n=153, %=0.9 in week 26; n=60, %=0.5 in week 27.
 Age class 0.2 males: n=211, %=0.4 in week 23; n=195, %=0.3 in week 24; n=161, %=0.5 in week 25.
 Age class 0.2 females: n=211, %=0.4 in week 23.
 Age class 3.3 females: n=42, %=1.4 in week 29; n=54, %=1.4 in week 30.
- 2/ European Formula - Number freshwater annuli - Decimal - number saltwater annuli. For example, age class 1.3 would be a fish in its fifth year of life with one winter in freshwater and three ocean winters.
- 3/ Figures include age classes not shown in Table.
- 4/ No age class data collected during week 20. Percentages used are those calculated for week 21.
- 5/ Percentages used in week 27 are weighted means from weeks 26 and 28.
- 6/ No age class data collected during week 30. Percentages used are those calculated for week 30.

Table 23. Age composition and mean length by sex of king salmon sampled in the commercial fishery, Copper River, 1975.

Sex	Ocean Age <u>1/</u>	Percent	Mean Length <u>2/</u>	Sample Size
M	.2	4.1	597.5	2
	.3	34.7	860.0	17
	.4	57.1	988.5	28
	.5	4.1	1,038.5	2
F	.2	1.6	613.0	1
	.3	43.6	828.6	27
	.4	54.8	937.6	34
Total Sample	.2	2.7	602.7	3
	.3	39.6	840.7	44
	.4	55.9	960.6	62
	.5	1.8	1,038.5	2

1/ Readable scales were interpreted to have the following composition:
87.9% one winter in freshwater, 12.1% two winters in freshwater.

2/ Mean length: mid-eye to fork-of-tail in millimeters.

PRINCE WILLIAM SOUND DISTRICTS

INTRODUCTION

The Prince William Sound Area is divided into six major districts principally for the management of a purse seine fishery for pink and chum salmon. The Sound is further divided into three smaller districts for the management of small, red salmon runs which are taken by set gill nets, drift gill nets and purse seines, Figure 1.

Fishing seasons are varied for each fishery and timed to intercept the various stocks. The Coghill-Unakwik district fishery for sockeye salmon is the earliest, beginning in late June and ending about mid-July for drift gill nets. Purse seine fishing in these districts coincides with drift gill net fishing, but is extended past the mid-July gill net closing date in order to harvest later runs of pink and chum salmon. Fishing in the Eshamy district is conducted by both drift and set gill nets. The season for this late sockeye salmon run usually begins in early July and extends into September. Purse seines fishing in the Southwestern district in July and August catch about 30 percent of the Eshamy sockeye before they enter the gill net fishery. The purse seine fishery is conducted in all Prince William Sound districts, except Eshamy. Purse seining usually begins in early or mid-July (late July in some years, depending upon the strength of early pink salmon runs, and usually extends into the first or second week of August.

For several years the weekly fishing time has been five days per week, 6:00 a.m. Monday until 6:00 a.m. Saturday, but in 1970 the weekly fishing time was changed to 6:00 a.m. Monday until 9:00 p.m. Friday.

A summary of Prince William Sound fishing seasons from 1960 to 1975 is shown in Table 24.

General Districts, Purse Seine Fishery

The Prince William Sound 1975 general purse seine season was scheduled to open on July 23, but aerial surveys conducted during early July indicated stronger than anticipated pink salmon runs, and the purse seine season was opened nine days earlier on July 14.

Fishing continued five days per week and was closed by emergency order on August 6. Weekly catch statistics are shown in Tables 25, 26, 27, 28 and 29.

Early and middle runs of pink salmon produced excellent catches and escapements, and the in-season forecasts indicated the pink run would exceed or be in the upper range of the forecasted run. By the end of July pink salmon catches had reached 3.5 million which indicated the run would exceed the upper range of the published forecast run of 4.9 million pinks. A corrected pink salmon forecast using additional data was made just prior to the season which gave an upper range of 5.7 million pinks, Table 30. Catch and escapement at the end of July also indicated the pink run would probably exceed the upper range of the adjusted season forecast. However, late runs of pinks were weaker than early and middle runs as shown by catches in early August and by escapements to late run spawning streams, and earlier expectations of a record run did not materialize.

Preliminary catch data after the season closure showed a pink salmon catch of 4.3 million, Table 28. Escapement counts conducted during and after the fishing season totaled 1.6 million, Table 31, for a total pink run of about 6.0 million.

Chum salmon runs, as expected from the forecast, were poor. Chum salmon taken incidental to the pink catch totaled 59.3 thousand, Table 29, and spawning escapements did not exceed 50,000, Table 31, with the chum run returning in the lower range of the forecast.

Commercial catches of pink, chum and sockeye salmon from 1920 to 1975 are shown in Figure 7.

1975 Prince William Sound Pink and Chum Salmon Forecast

The published forecast of pink salmon as contained in Informational Leaflet No. 167, January 1975, was subsequently revised upward prior to the pink salmon season from a point estimate of 3.1 million to 4.3 million with respective ranges of 1.3 - 4.9 million to 2.9 - 5.7 million pinks.

The returning estimated run of 6.07 million pink salmon, from catch and escapement in 1975, was 6.1 percent above the upper range of 5.7 million in the revised forecast.

The chum salmon point forecast of 215,000 is 31.1 percent above the estimated returning run of 148,162. The returning chum salmon run falls within the lower range (137,000 - 293,000) of the forecast.

Comparable forecast data is shown in Table 30.

Escapement

Weekly aerial spawning escapement counts and periodic ground surveys were made on selected streams to determine the progress of escapements, and to provide estimates for calculating season escapements for sockeye, pinks and chums. Surveys were conducted weekly from early July until late September including a total of 192 streams. Estimated escapement by species, by district, is summarized in Table 31.

The total estimated pink salmon spawning escapement in Prince William Sound streams totaled about 1.6 million, Table 31, as compared to a desired maximum level of 1.5 million. The distribution of the pink salmon spawning escapements was not adequately balanced, however, which resulted in more than desired in the Eastern and Coghill districts, less than desired in the Northern, Northwestern and Southwestern districts, and adequate numbers in Montague and Southeastern districts. Escapement of pinks in the Montague district was skewed somewhat to the north end of the Island although fair numbers and good distribution occurred in most streams. The overall pink escapement in the Montague and Southeastern districts was good.

The chum salmon run returning in 1975 was very poor which resulted in the smallest spawning escapement since 1947. The Montague district was the poorest with no chums observed by either air or ground surveys. A minimal spawning escapement of 46,760, Table 31, is about 23 percent of the desired escapement level for Prince William Sound.

Escapement of sockeye salmon in Prince William Sound streams in 1975 was poor. Figure 8 shows the pink, chum and sockeye salmon spawning escapements in Prince William Sound streams since 1927.

Age Composition

Age composition of sockeye salmon commercial catches from Coghill and general districts is presented in Table 32.

Table 24. Prince William Sound summary of fishing seasons, 1960 - 1975.

Year	Opening Date	Closing Date	Season Extensions	Special Closures	Weekly Closures	DISTRICT OPENINGS AND CLOSURES			
						Eshamy	Coghill	- Unakwik	
1960	1201	1800	8/3	None	7/4 - 10 1/2	72 hrs.	7/1	8/18	7/14
1961	Eastern	Southeastern	2/						
	0600	1800	8/14						
	Montague	2/							
	0600	1800	8/14						
1962	General	3/							
	0600	2400	8/13		119 hrs. 4/	7/2	8/15	6/18	7/14
1963	0600	1900	8/19	4/		CLOSED		6/18	7/14
1964	0600	0600	8/15	4/	48 hrs.			6/18	7/14
1965	0600	1800	8/3	4/	48 hrs.			6/21	7/17
1966	0600	1800	8/12	4/	48 hrs.	7/4	8/19	6/20	7/16
1967	0600	1800	8/4	4/	48 hrs.			6/20	7/22
1968	0600	1800	8/8	4/	4/			6/20	7/15
1969	0600	1800	8/8	None	48 hrs.	7/7	8/22	6/20	7/12
1970	0600	2100	8/6	None	57 hrs.	7/7	8/14	6/22	7/17
1971	0600	1200	8/16	None	57 hrs.			6/21	7/16
1972		CLOSED			57 hrs.	7/5	8/25	6/19	7/19
1973	0600	2100	8/8	8/3 - 8	57 hrs.	7/2	8/3	6/18	7/20
1974		CLOSED			57 hrs.	7/2	7/31	6/18	7/19
1975	0600	2100	8/6	None	57 hrs.		CLOSED	6/18	8/6

- 1/ Fishing days by gear time table during season. On 8/2 - 3 fishing allowed 12 hour day. Fishing closed 1800, 8/2/
- 2/ Twelve hour fishing day.
- 3/ Fourteen hour fishing day.
- 4/ Refer to special regulatory changes by field announcement. For fishing seasons prior to 1960 refer to 1964 Annual Management Report.

Table 25. Prince William Sound king salmon weekly catch by purse seines, 1975. 1/

Week No.	Total Catch	Total Pounds	Average Wt./Fish	No. Units Gear <u>4/</u>	Average No. Fish/Boat	No. Fishing Days/Week <u>3/</u>
26 <u>2/</u>	22	100	4.55	2	11.0	5
27	26	233	8.96	15	1.7	5
28	313	1,961	6.27	56	5.6	5
29	728	5,676	7.80	183	4.0	5
30	288	3,246	11.27	214	1.3	5
31	170	2,325	13.68	215	*	5
32	53	863	16.28	212	*	3
TOTAL	1,600	14,404	9.83			33

* Less than one.

1/ Preliminary data.

2/ Week 26 through 28 catches from early Coghill - Unakwik season.

3/ Fishing 24 hours per day except Friday when fishing was allowed until 9:00 p.m., and Monday when fishing started at 6:00 a.m.

4/ This includes some duplicates of vessels that fished and delivered in more than one area during some weeks.

Table 26. Prince William Sound sockeye salmon weekly catch by purse seines, 1975. 1/

Week No.	Total Catch	Total Pounds	Average Wt./Fish	No. Units Gear <u>4/</u>	Average No. Fish/Boat	No. Fishing Days/Week <u>3/</u>
26 <u>2/</u>	76	660	8.68	2	38	5
27	1,087	8,144	7.49	15	72	5
28	3,658	24,821	6.79	56	65	5
29	11,794	78,093	6.62	183	64	5
30	6,410	43,085	6.73	214	30	5
31	3,232	21,588	6.68	215	15	5
32	952	6,893	7.24	212	4	3
TOTAL	27,209	183,209	6.74			33

1/ Preliminary data.

2/ Week 26 through 28 catches from early Coghill - Unakwik season.

3/ Fishing 24 hours per day except Friday when fishing was allowed until 9:00 p.m., and Monday when fishing started at 6:00 a.m.

4/ This includes some duplicates of vessels that fished and delivered in more than one area during some weeks.

Table 27. Prince William Sound coho salmon weekly catch by purse seines, 1975. 1/

Week No.	Total Catch	Total Pounds	Average Wt./Fish	No. Units Gear <u>4/</u>	Average No. Fish/Boat	No. Fishing Days/Week <u>3/</u>
28 <u>2/</u>	281	991	3.53	56	4.3	5
29	573	4,542	7.92	183	3.1	5
30	1,912	14,837	7.76	214	8.9	5
31	2,025	16,802	8.30	215	9.4	5
32	869	7,670	8.82	212	4.0	3
TOTAL	5,660	44,842	7.92			23

1/ Preliminary data

2/ Week 28 catch from early Coghill - Unakwik season.

3/ Fishing 24 hours per day except Friday when fishing was allowed until 9:00 p.m., and Monday when fishing started at 6:00 a.m.

4/ This includes some duplicates of vessels that fished and delivered in more than one area during some weeks.

Table 28. Prince William Sound pink salmon weekly catch by purse seines, 1975. 1/

Week No.	Total Catch	Total Pounds	Average Wt./Fish	No. Units Gear <u>4/</u>	Average No. Fish/Boat	No. Fishing Days/Week <u>3/</u>
26 <u>2/</u>	18	67	3.72	2	9	5
27	342	1,479	4.32	15	23	5
28	58,275	216,876	3.72	56	1,041	5
29	772,169	2,777,206	3.60	183	4,220	5
30	1,227,059	4,375,168	3.57	214	5,734	5
31	1,512,553	5,483,811	3.63	215	7,035	5
32	695,867	2,560,246	3.68	212	3,282	3
TOTAL	4,266,283	15,414,853	3.61			33

1/ Preliminary data.

2/ Week 26 through week 28 catches from early Coghill - Unakwik season.

3/ Fishing 24 hours per day except Friday when fishing was allowed until 9:00 p.m., and Monday when fishing started at 6:00 a.m.

4/ This includes some duplicates of vessels that fished and delivered in more than one area during some weeks.

Table 29. Prince William Sound chum salmon weekly catch by purse seines, 1975. 1/

Week No.	Total Catch	Total Pounds	Average Wt./Fish	No. Units Gear <u>4/</u>	Average No. Fish/Boat	No. Fishing Days/Week <u>3/</u>
27 <u>2/</u>	210	1,446	6.89	15	14	5
28	1,662	12,055	7.25	56	30	5
29	20,235	145,612	7.20	183	111	5
30	16,763	118,700	7.08	214	78	5
31	15,566	110,656	7.10	215	72	5
32	4,880	36,735	7.53	212	23	3
TOTAL	59,316	425,204	7.16			28

1/ Preliminary data.

2/ Week 27 and 28 catches from early Coghill - Unakwik season.

3/ Fishing 24 hours per day except Friday when fishing was allowed until 9:00 p.m., and Monday when fishing started at 6:00 a.m.

4/ This includes some duplicates of vessels that fished and delivered in more than one area during some weeks.

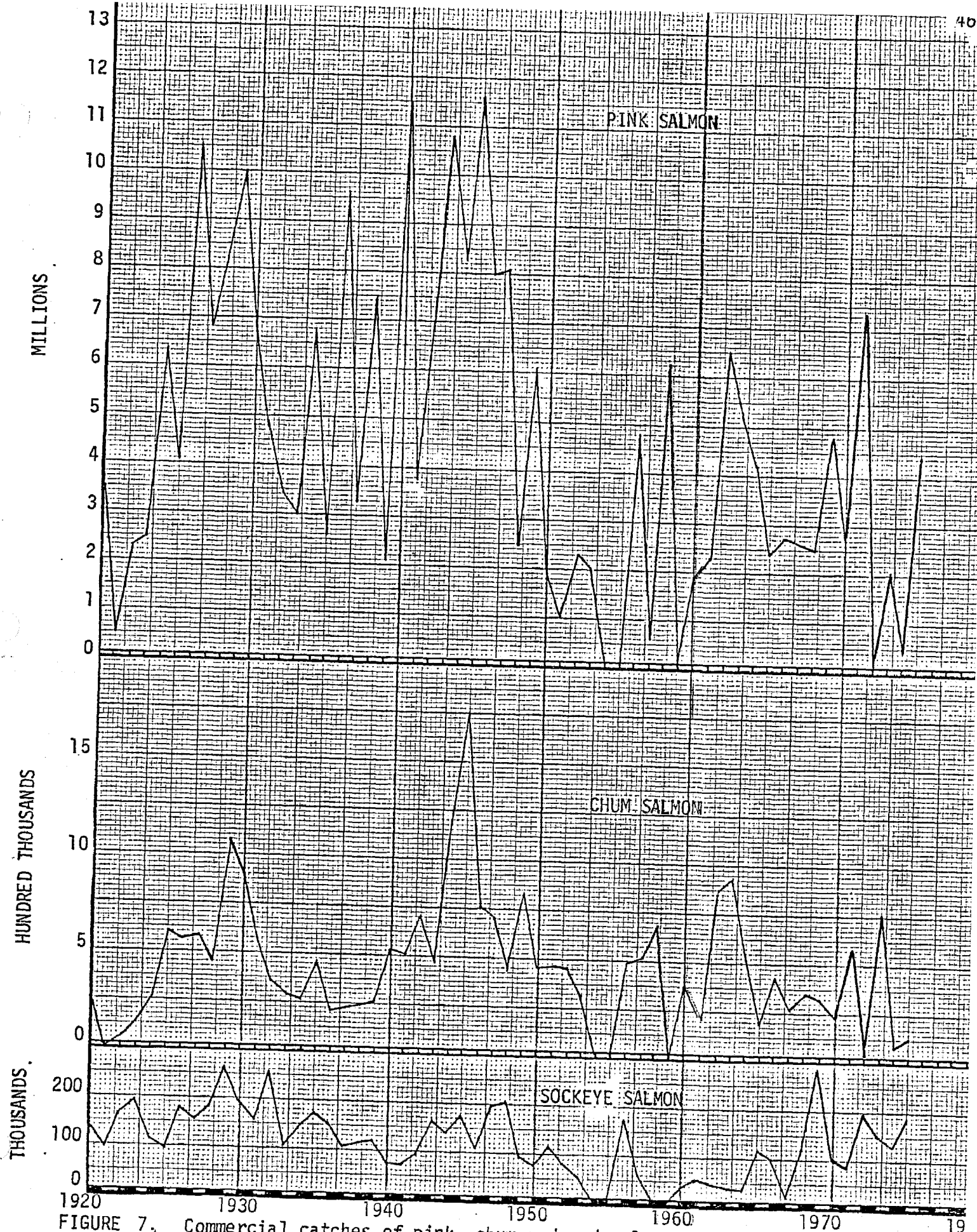


FIGURE 7. Commercial catches of pink, chum and red salmon in Prince William Sound from 1920 to 1975. Catches in years 1921, 1954, 1955, 1959, 1972 and 1974 are not indicative of abundance due to restrictions of economic or regulatory nature.

Table 30. Comparison of Prince William Sound pink, chum and sockeye salmon run forecasts showing the percent of error, 1962 - 1975.

Year	Pink		Chum		Sockeye	
	Mean Forecast 1/	Percent Error 2/	Mean Forecast 1/	Percent Error 2/	Mean Forecast 1/	Percent Error 2/
1962	8.9	8.7		+ 2.25		
1963	5.0	3/ 6.6		-32.00		
1964	6.1	6.0	1.00	+ 1.64	0.92	+ 8.00
1965	4.2	3.4	0.73	+19.05	0.39	+46.58
1966	6.3	4.0	0.58	+36.51	0.65	-12.07
1967	3.3	3.8	0.44	-15.15	0.45	- 2.27
1968	3.1	3.5	0.68	-12.90	0.55	+19.12
1969	5.8	5.9	0.44	- 1.72	0.48	- 9.09
1970	4.4	3.8	0.34	+13.64	0.33	+ 2.94
1971	6.2	9.5	0.76	-34.57	0.74	+ 2.63
1972	1.7	0.9	0.80	+47.06	0.47	+41.25
1973	2.7	3.3	0.64	-17.85	1.28	-100.00
1974	2.0	1.3	0.29	+35.00	0.28	+ 3.45
1975	4.3	6.1	0.22	-41.86	0.15	+31.81

1/ In millions of fish.

2/ (Mean Forecast minus Actual Estimated Return)

Mean Forecast

3/ Weighted fry densities to include upstream production indicated 5.8 million, or an error of -13.2 percent.

4/ Using expanded estimate of 4 year return to total.

* Estimated.

Table 31. Prince William Sound pink, chum and sockeye salmon total estimated spawning escapement by district, 1975. 1/

<u>District</u>	<u>Number of Streams Surveyed</u>	<u>Pinks</u>	<u>Chums</u>	<u>Sockeye</u>
Eastern	50	570,850	28,190	1,000
Northern - Unakwik	20	44,290	7,820	200
Coghill	5	552,780	5,000	33,930 <u>2/</u>
Northwestern	24	27,400	2,410	500 *
Eshamy	5	5,720	440	1,750 <u>2/</u>
Southwestern	25	72,160	580	3,350
Montague	33	110,950	0	0
Southeastern	30	234,220	2,760	0
TOTAL	192	1,618,370	46,760	40,730

1/ Number of salmon rounded to nearest 10.

2/ Weir count for Eshamy and Coghill Rivers.

* Not surveyed in 1975. Estimate.

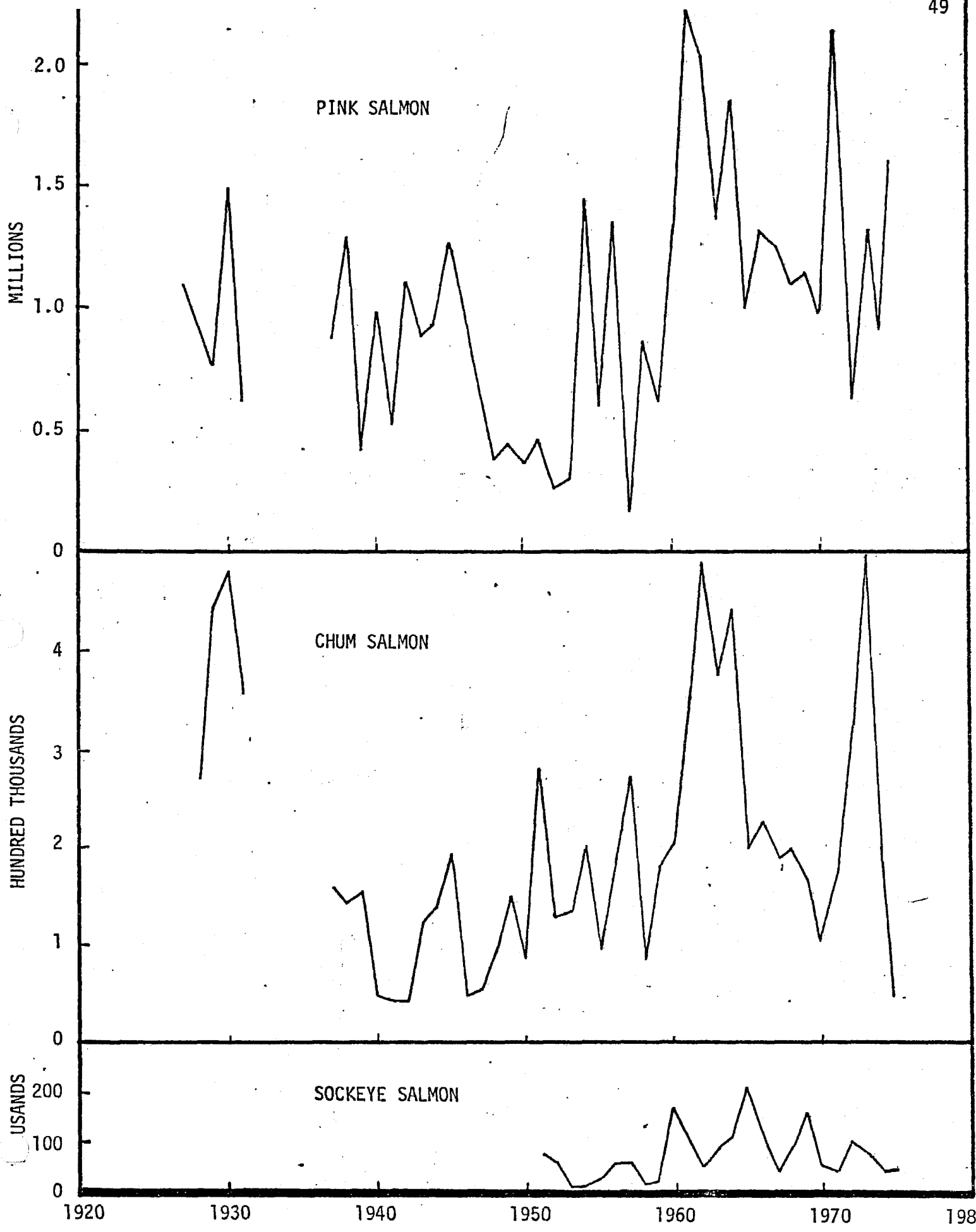


Figure 8. Annual estimated salmon spawning escapement in Prince William Sound, 1927 - 1975.

Table 32. Age composition of sockeye salmon commercial catches from Coghill and general districts, by statistical week, sex and sexes combined, Prince William Sound, 1975.

Statistical Week	Age Group					Total
	32 1.1	42 1.2	53 2.2	52 1.3	63 2.3	
-6/21						
Males						
Number	0	0	1	19	0	20
Percent	0.00	0.00	2.78	52.78	0.00	52.56
Females						
Number	0	0	0	16	0	16
Percent	0.00	0.00	0.00	44.44	0.00	44.44
Sexes combined						
Number	0	0	1	35	0	36
Percent	0.00	0.00	2.78	97.22	0.00	100.00
6/22-28						
Males						
Number	0	3	3	86	4	96
Percent	0.00	1.55	1.55	44.57	2.07	49.74
Females						
Number	0	1	3	87	6	97
Percent	0.00	0.52	1.55	45.08	3.11	50.26
Sexes combined						
Number	0	4	6	173	10	193
Percent	0.00	2.07	3.10	89.65	5.18	100.00
6/29-7/5						
Males						
Number	0	4	3	84	6	97
Percent	0.00	1.95	1.46	40.98	2.93	47.32
Females						
Number	0	4	4	95	5	108
Percent	0.00	1.95	1.95	46.34	2.44	52.68
Sexes Combined						
Number	0	8	7	179	11	205
Percent	0.00	3.90	3.41	87.32	5.37	100.00
7/6-12						
Males						
Number	0	0	2	88	7	98
Percent	0.00	0.00	1.03	45.12	3.59	49.74
Females						
Number	0	2	2	87	7	98
Percent	0.00	1.03	1.03	44.61	3.59	50.26
Sexes Combined						
Number	0	2	4	175	14	195
Percent	0.00	1.03	2.06	89.73	7.18	100.00

Table 32, cont. Age composition of sockeye salmon commercial catches from Coghill and general districts, by statistical week, sex and sexes combined, Prince William Sound, 1975.

Statistical Week	<u>3₂</u> 1.1	<u>4₂</u> 1.2	<u>5₃</u> 2.2	<u>5₂</u> 1.3	<u>6₃</u> 2.3	<u>Total</u>
7/13-19						
Males						
Number	1	17	11	50	7	86
Percent	0.51	8.72	5.64	25.64	3.59	44.10
Females						
Number	0	17	15	72	5	109
Percent	0.00	8.72	7.69	36.93	2.56	55.90
Sexes combined						
Number	1	34	26	122	12	195
Percent	0.51	17.44	13.33	62.57	6.15	100.00
7/20-26						
Males						
Number	0	2	8	10	2	22
Percent	0.00	3.85	15.38	19.23	3.85	42.31
Females						
Number	0	4	7	17	2	30
Percent	0.00	7.70	13.46	32.68	3.85	57.69
Sexes combined						
Number	0	6	15	27	4	52
Percent	0.00	11.55	28.84	51.91	7.70	100.00
7/27-8/2						
Males						
Number	0	4	8	4	1	17
Percent	0.00	12.90	25.80	12.90	3.24	54.84
Females						
Number	0	4	6	4	0	14
Percent	0.00	12.90	19.36	12.90	0.00	45.16
Sexes combined						
Number	0	8	14	8	1	31
Percent	0.00	25.80	45.16	25.80	3.24	100.00
TOTAL						
Males						
Number	1	30	36	341	27	435
Percent	0.11	3.31	3.97	37.60	2.98	47.96
Females						
Number	0	32	37	378	25	472
Percent	0.00	3.53	4.08	41.67	2.75	52.04
Sexes combined						
Number	1	62	73	719	52	907
Percent	0.11	6.84	8.05	79.27	5.73	100.00

ESHAMY DISTRICT

Commercial Fishery

In expectations of a small return of sockeye salmon to Eshamy district the season was closed to fishing in 1975.

Table 33 presents Eshamy district salmon catch from 1950 to 1975, while Figure 9 shows the commercial catch from 1961 to 1975.

Escapement

The 1975 spawning escapement to Eshamy Lake and River is shown by the daily weir count in Table 34. Cumulative weir counts by year are shown in Table 35. Annual weir sockeye escapement counts from 1961 to 1975 is presented in graph form in Figure 10. Counting at the weir in 1975 began on June 15, but no sockeye were observed until July 5. Counting was interrupted on September 8 and 9, and continued from September 10 until terminated for the year on September 14. The 1975 weir count of 1,724 is the third lowest count recorded in the last five year period and the second critically low spawning escapement in a row.

General weather and Eshamy River water level data is presented in Table 36.

Table 33. Eshamy district salmon catch, 1950 - 1975.

Year	Kings	Sockeye	Pinks	Chums	Cohos	Total
1950		26,772	23,289	3,976	780	54,817
1951		78,360	62,790	9,552	1,580	152,282
1952		43,128	11,025	2,872	720	57,745
1953		15,828	52,815	9,152	1,070	78,865
1954		7,848	15,666	5,560	560	29,634
1955		12,919	26,857	4,806	595	45,177
1956		75,355	32,101	14,439	788	122,683
1957		33,665	22,672	12,183	738	69,253
1958			S E A S O N	C L O S E D		
1959			S E A S O N	C L O S E D		
1960			S E A S O N	C L O S E D		
1961		55,133	113,326	22,918	1,324	192,701
1962		23,857	76,345	39,909	3,895	144,006
1963			S E A S O N	C L O S E D		
1964			S E A S O N	C L O S E D		
1965		15,456	550	649	71	16,726
1966		20,826	36,584	7,896	745	66,051
1967			S E A S O N	C L O S E D		
1968			S E A S O N	C L O S E D		
1969	16	61,728	25,273	8,021	46	95,084
1970	2	17,292	44,381	5,632	579	67,836
1971			S E A S O N	C L O S E D		
1972	82	52,888	45,378	26,008	1,146	125,499
1973	69	16,439	21,501	27,546	149	65,704
1974	22	19,034	285,441	28,896	125	333,518
1975			S E A S O N	C L O S E D		
<hr/>						
TOTAL	191	576,528	895,991	230,015	14,911	1,717,636
<hr/>						
AVERAGE ^{1/}	11	33,913	52,705	13,530	877	101,037
<hr/>						

^{1/} Average of years fished.

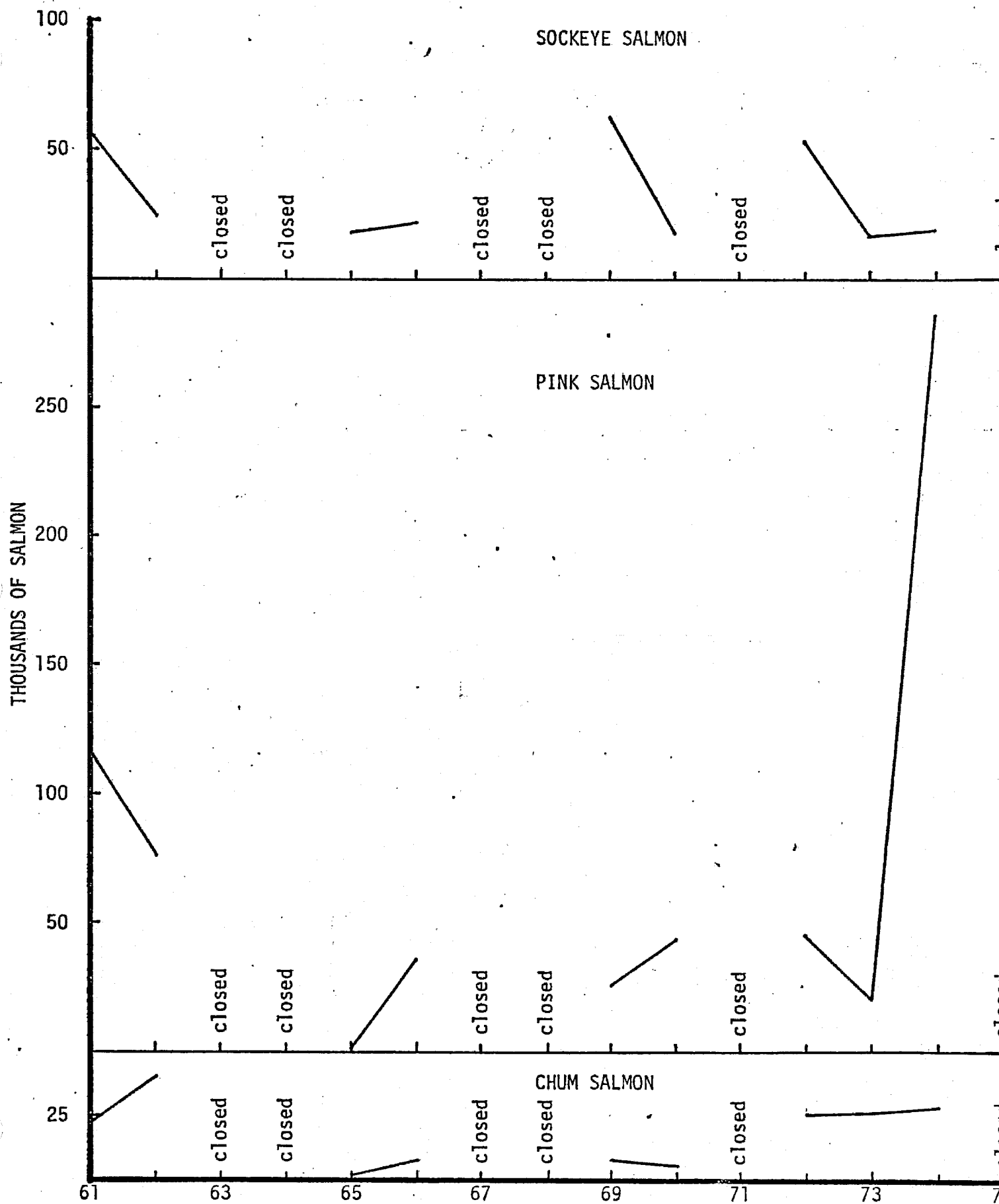


Figure 9. Eshamy district commercial salmon catches, 1961 - 1975.

Table 34. Eshamy River daily weir count, 1975.

Date	Sockeye Salmon Daily Count		Daily Total	Weekly Total	Cumulative Total
	Adult	Jack			
6/15	weir installed				
7/5 *	55	18	73		73
6	1		1	74	74
7	2		2		76
8	17	9	26		102
9	15	7	22		124
10	84	29	113		237
11	78	27	105		342
12	12	12	24		366
13	7	3	10	302	376
14	25	4	29		405
15	3	2	5		410
16	4		4		414
17	46	3	49		463
18	8		8		471
19		1	1		472
20	6		6	102	478
21	14	1	15		493
22	8	1	9		502
23	25	2	27		529
24					529
25	4		4		533
26		1	1		534
27	4		4	60	538
28	19		19		557
29					557
30	200	3	203		760
31					760
8/1	15	2	17		777
2	9		9		786
3	23		23	271	809
4	38	4	42		851
5	4	1	5		856
6	35		35		891
7	15	1	16		907
8	21	1	22		929
9	27	2	29		958
10	25	2	27	176	985
11	24	2	26		1,011
12	2	1	3		1,014
13	153	6	159		1,173
14	143	5	148		1,321
15	17		17		1,338
16	22	1	23		1,361
17	30	1	31	407	1,392
18	18	1	19		1,411
19	16		16		1,427
20	9	1	10		1,437

Table 34, cont. Eshamy River daily weir count, 1975

Date	Sockeye Adult	Salmon Daily Count Jack	Daily Total	Weekly Total	Cumulative Total
8/21	17	2	19		1,456
22	13		13		1,469
23	33	4	37		1,506
24	8	1	9	153	1,515
25	17		17		1,532
26	45		45		1,577
27	6		6		1,583
28	8	2	10		1,593
29	21	4	25		1,618
30	11	2	13		1,631
31	7	1	8	114	1,639
9/1	14		14		1,653
2	9	4	13		1,666
3	15	4	19		1,685
4	7	2	9		1,694
5	12	2	14		1,708
6	10	2	12		1,720
7	2	1	3	84	1,723
8	pickets pulled from weir. 12 sockeye at mouth				1,723
9					1,723
10	replaced pickets in weir.				1,723
11	1		1		1,724
12					1,724
13					1,724
14				1	1,724
TOTAL	1,539	185			1,724

* First salmon through the weir.

Table 35. Eshamy River red salmon weekly cumulative weir counts, 1961 - 1975.

Date Ending	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
6/30	2,183	1,096	0	8	0	16	26	363	47	64	0	0	0	19	0
7/7	3,421	1,441	116	28	0	49	846	639	347	172	0	2,625	20	93	76
7/14	4,317	1,768	168	1,948	885	784	858	1,362	1,151	240	0	4,863	43	110	405
7/21	5,381	1,877	195	3,379	1,553	1,181	875	1,948	1,220	341	55	6,664	67	158	493
7/28	6,209	2,024	211	5,336	5,110	2,795	896	2,012	1,224	932	585	6,881	171	214	557
8/4	7,438	2,132	222	6,706	8,271	5,281	1,195	6,503	2,712	1,632	731	7,756	366	277	851
8/11	21,412	3,704	546	8,657	11,252	10,670	3,208	10,925	4,755	2,046	799	11,088	807	331	1,011
8/18	31,580	5,538	716	17,604	28,568	13,912	3,871	23,806	5,599	7,204	811	22,822	1,626	433	1,411
8/25	38,474	7,450	2,063	45,994	41,965	25,471	9,031	66,113	7,059	9,675	934	25,159	4,658	493	1,532
9/2	45,072	8,720	2,588	65,672	51,150	26,375	10,746	67,766	10,935	11,065	944	26,931	5,354	633	1,666
9/9	46,400	9,297	3,064	67,730	53,053	26,572	10,821	68,048	24,722	11,431	951	28,472	9,127		1,723
9/16	47,275	9,390	3,092		90,438	26,593			61,185	11,460	954	28,683	10,202		1,724
9/23					108,934				61,196						
TOTAL	47,275	9,390	3,092	67,730	108,934	26,593	10,821	68,048	61,196	11,460	954*	28,683	10,202	633	1,724

* Probably inaccurate because of holes in weir. Actual escapement is estimated to be at least 3,000.

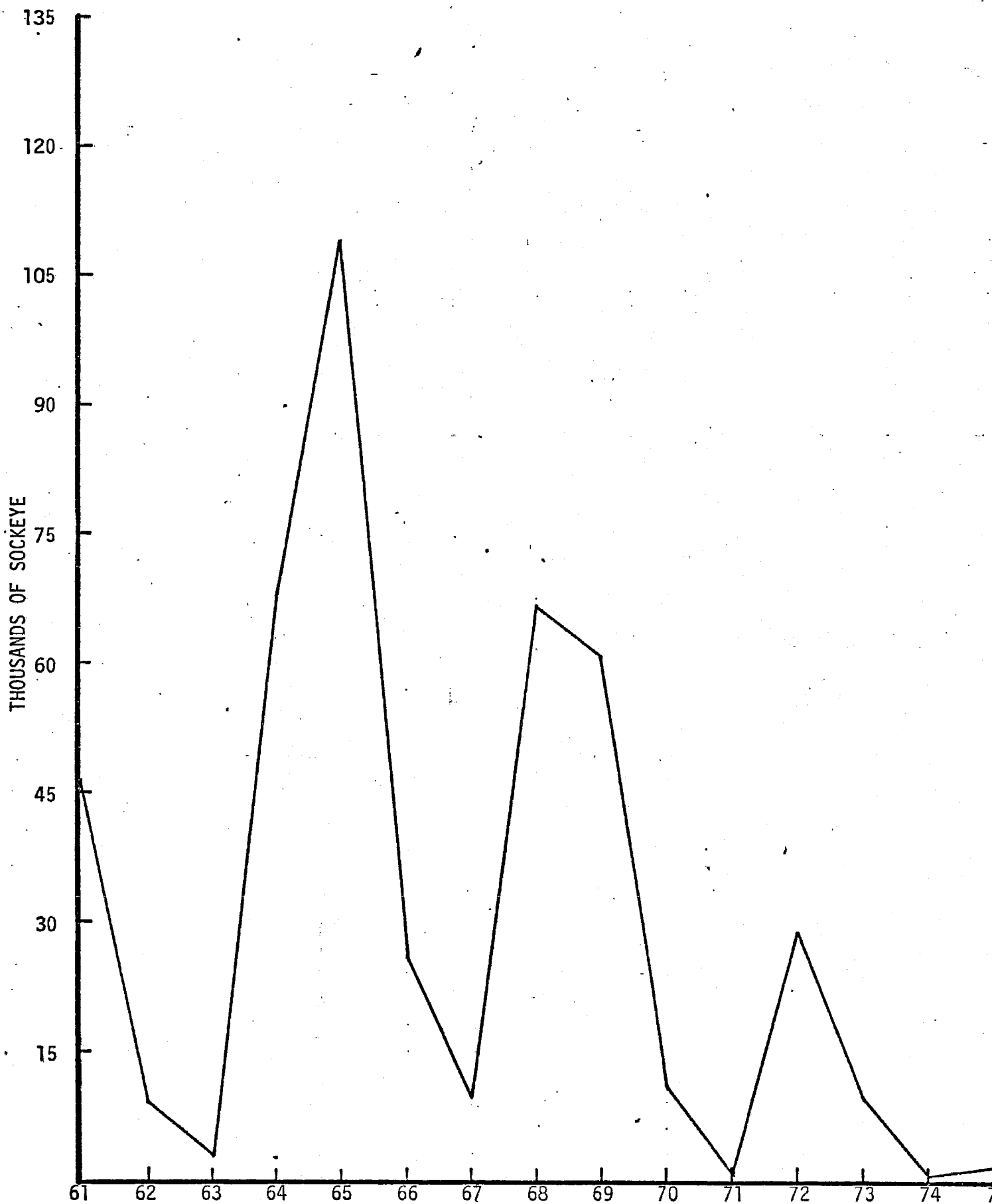


Figure 10. Annual Eshamy River weir sockeye escapement counts, 1961 - 1975.

Table 36. Eshamy River weir station weather data, 1974. 1/

<u>Date</u>	<u>Air Temp.</u> <u>(1700 hrs.)</u>	<u>-Air</u> <u>Max.</u>	<u>Temp.</u> <u>Min.</u>	<u>Water</u> <u>Temp.</u>	<u>General</u> <u>Weather</u>	<u>Precipitation</u>
6/16				36	2 Scattered Clouds	
17				36	2 Scattered Clouds	
18				36	3 Broken Clouds	
19				36	4 Overcast	R
20				36	3 Broken Clouds	
21				37	4 Overcast	
22				37	4 Overcast	T
23				37	4 Overcast	R
24				38	4 Overcast	T
25				38	4 Overcast	
26				38	3 Broken Clouds	
27				38	1 Clear	
28				38	1 Clear	
29				38	3 Broken Clouds	
30				38	4 Overcast	T
7/ 1	52	54	41	38	4 Overcast	R
2	58	60	40	41	2 Scattered Clouds	
3	50	54	43	40	4 Overcast	T
4	54	56	41	40	4 Overcast	T
5	62	65	37	42	1 Clear	
6	63	66	41	43	1 Clear	
7	66	70	45	46	1 Clear	
8	71	71	46	48	1 Clear	
9	67	70	49	51	1 Clear	
10	67	70	50	52	1 Clear	
11	60	67	48	54	2 Scattered Clouds	
12	60	60	49	54	4 Overcast	
13	57	60	48	54	4 Overcast	
14	58	60	45	53	3 Broken - Scattered	
15	58	58	44	54	4 Overcast	T
16	56	57	48	54	4 Overcast	R
17	58	60	46	54	3 Broken Clouds	
18	60	61	47	54	3 Broken Clouds	T
19	55	61	48	54	4 Overcast	R
20	54	56	48	54	4 Overcast	T
21	54	55	47	55	4 Overcast	R
22	59	60	45	55	4 Overcast	
23	57	57	44	54	4 Overcast	R
24	56	57	45	55	4 Overcast	R
25	54	57	48	55	4 Overcast	T
26	62	63	46	54	2 Scattered Clouds	
27	62	64	44	54	2 Scattered Clouds	
28	59	64	48	56	4 Overcast	
29	59	63	48	56	4 Overcast	R
30	54	54	48	54	4 Overcast	R
31	56	57	46	54	3 Broken Clouds	

Table 36, cont. Eshamy River weir station weather data, 1975. 1/

Date	Air Temp. (1700 hrs.)	Air Max.	Temp. Min.	Water Temp.	General Weather	Precipitation
8/ 1	56	58	46	55	4 Overcast	
2	62	63	47	55	4 Overcast - Clear	
3	68	70	45	55	1 Clear	
4	70	71	47	56	1 Clear	
5	63	63	52	57	4 Overcast - Clear	T
6	60	63	44	57	2 Scattered Clouds	
7	59	62	45	57	4 Overcast	
8	60	61	46	57	2 Scattered Clouds	
9	62	63	46	57	4 Overcast	
10	62	63	44	57	4 Overcast	
11	58	63	45	58	4 Overcast	
12	57	61	48	56	4 Overcast	R
13	55	57	51	56	4 Overcast	R
14	56	56	49	56	4 Overcast	R
15	54	56	51	56	4 Overcast	R
16	58	58	48	57	4 Overcast	
17	56	59	49	56	4 Overcast	R
18	51	53	48	55	4 Overcast	R
19	52	55	46	54	4 Overcast	R
20	55	52	46	54	3 Broken Clouds	
21	58	64	41	54	1 Clear	
22	60	64	42	54	1 Clear	
23	56	58	44	54	4 Overcast	
24	54	56	48	55	4 Overcast	T
25	58	61	42	55	1 Clear	
26	60	60	46	55	1 Clear	
27	64	70	50	55	1 Clear	
28	60	70	42	55	1 Clear	
29	58	62	38	54	1 Clear	
30	54	56	40	53	4 Overcast	R
31	56	57	40	53	4 Overcast	R
9/ 1	58	61	38	53	1 Clear	
2	53	56	42	53	4 Overcast	R
3	52	54	46	52	4 Overcast	R
4	54	55	42	54	1 Clear - Overcast	
5	50	56	41	53	4 Overcast	R
6	51	52	43	52	4 Overcast	R
7	50	53	43	53	3 Broken Clouds	R
8	49	53	39	52	4 Overcast	R
9	52	52	34	52	4 Overcast	R
10	50	52	36	46	4 Overcast	R
11	51	54	44	51	4 Overcast	R
12	50	58	43	50	1 Clear	
13	56	60	38	50	2 Scattered Clouds	
14	50	55	43	50	4 Overcast	

1/ Temperature in degrees Fahrenheit.

R = Rain

T = Trace of rain or showers

COGHILL AND UNAKWIK DISTRICTS

Commercial Fishery

The fishery opened as scheduled on June 18 and continued five days per week until closed by emergency order on August 6.

The large return of pink salmon to Coghill River was anticipated, but adjustments in fishing area during the season was not entirely successful in adequately harvesting the run. On July 1 additional fishing area was opened to purse seines in the Culross Island area of the Northwestern District to intercept pinks bound for Coghill River. A tagging experiment was conducted in conjunction with the opening of Culross Island and preliminary tag recovery data showed that the majority of the pinks were bound for Coghill River.

In addition to the extension of fishing in the Northwestern District the Coghill River closed area was opened to fishing on July 21 after the sockeye escapement was assured. Fishing was allowed up to the mouth of Coghill River for the remainder of the season.

The fishery produced good catches of sockeye salmon and fair to good catches of both pink and chum salmon. Seasons totals show a catch of 171,279 sockeye, 526,080 pinks and 47,427 chums for both purse seine and drift gill net gear in the Coghill - Unakwik fishery, Table 37. Figure 11 shows commercial catches for the districts from 1961 to 1975.

Escapement

Weir counts of salmon in Coghill River showed a good sockeye escapement of 34,855, Table 38. Comparative Coghill River spawning escapement estimates from 1960 to 1975 are shown in Table 40. Aerial surveys of Coghill River and Lake produced an escapement estimate of about 500,000 pinks and approximately 5,000 chums. Annual Coghill River aerial salmon spawning escapement counts from 1961 to 1975 are presented in Figure 12.

General weather data is given in Table 39.

Table 37. Coghill and Unakwik district purse seine and drift gill net weekly catch, 1975. 1/ *

<u>Week</u>	<u>Purse Seine</u>					<u>Units of Gear</u> 2/
	<u>King</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	
26	22	76		18		2
27	26	1,087		342	210	15
28	313	3,658	281	58,275	1,662	56
29 3/	54	2,672	30	122,066	2,048	45
30	59	1,190	48	100,381	1,025	25
31	9	168	42	44,886	1,073	11
32	2	24	14	13,175	246	13
<hr/>						
Sub-total	485	8,875	415	339,558	6,264	
<hr/>						
	<u>Drift Gill Net</u>					
25	60	13,787	4	247	1,412	97
26	105	55,306	4	1,550	6,616	224
27	200	51,262	103	8,153	10,571	311
28	108	28,834	129	45,418	11,268	250
29 3/	73	9,839	118	45,078	3,964	66
30	85	2,399	54	42,014	3,132	49
31	54	653	46	35,543	3,515	46
32	10	324	15	8,519	685	41
<hr/>						
Sub-total	695	162,404	473	186,522	41,163	
<hr/>						
TOTAL	1,180	171,279	888	526,080	47,427	

1/ The west side of Port Wells was also open to purse seine (some drift gill nets fished until advised of legalities) fishing during the Coghill fishery, and the catch is included here. Also, Culross Island area was opened by emergency order on July 1 to purse seines (some drift gill nets fished until advised of legalities), and the catch is included here.

2/ Includes some duplicates of vessels that fished more than one area during some weeks.

3/ General purse seine season opened this week.

* Preliminary.

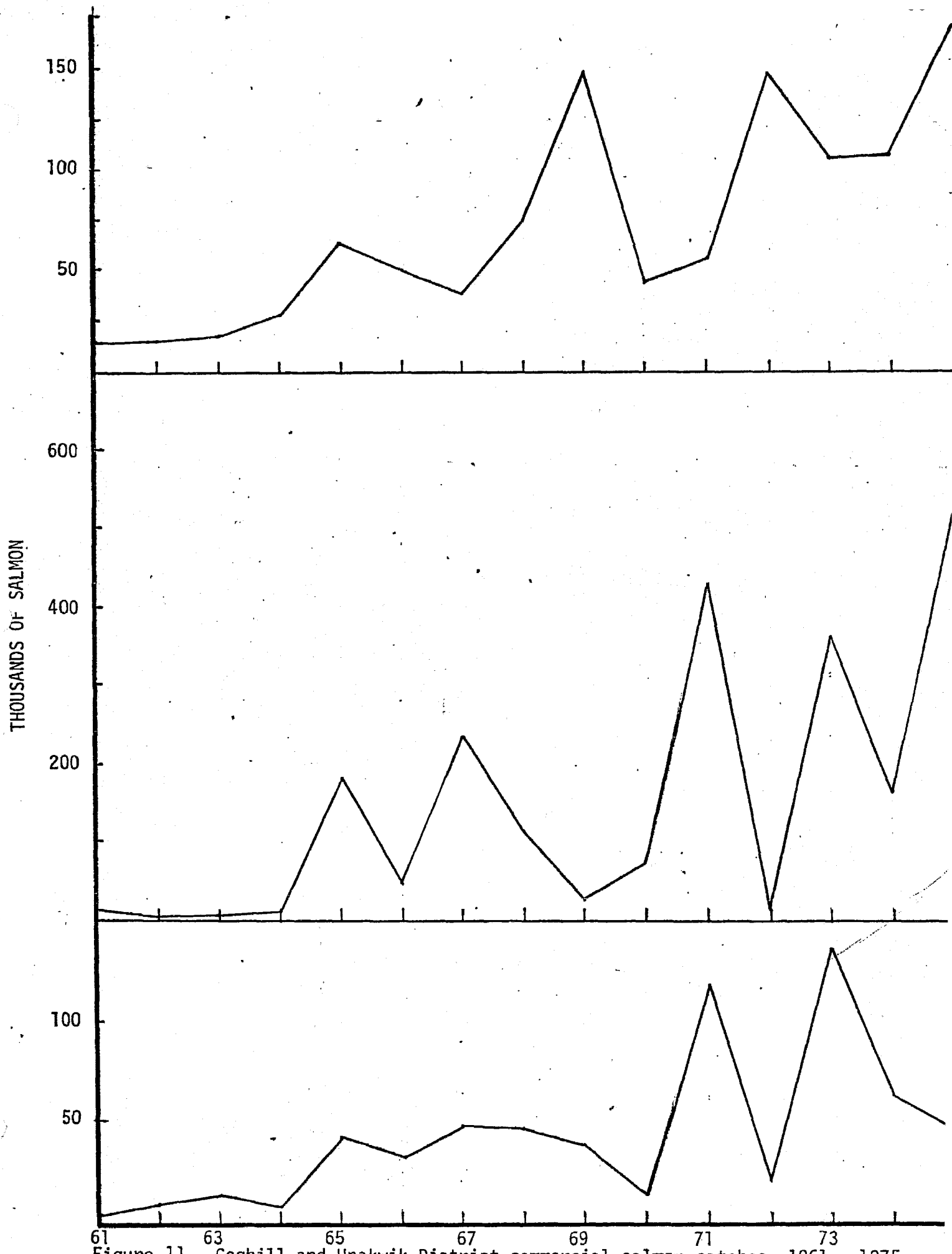


Figure 11. Coghill and Unakwik District commercial salmon catches, 1961 - 1975.

Table 38. Coghill River daily weir count, 1975.

Date	Sockeye Counts		Total	Cumulative Total
	Sockeye	Jack <u>1/</u>		
6/25	weir in operation			
7/ 4	salmon first sighted at weir			
5	5		5	5
6	318	42	360	365
7	4664	484	5148	5513
8	6709	289	6998	12511
9	2685	75	2760	15271
10	2506	137	2643	17914
11	1384		1384	19298
12	1024		1024	20322
13	727		727	21049
14	3568		3568	24617
15	986		986	25603
16	282		282	25885
17	1360		1360	27245
18	1090		1090	28335
19	199		199	28534
20	719		719	29253
21	500	9	509	29762
22	702	26	728	30490
23	943	37	980	31470
24	347	51	398	31868
25	260	58	318	32186
26	230	73	303	32489
27	258	78	336	32825
28	188	87	275	33100
29	333	99	432	33532
30	622		622	34154
31	75	117	192	34346
8/ 1	68	128	196	34542
2	15	129	144	34686
3	38	131	169	34855
<hr/>				
TOTAL	32805	2050		

1/ Sockeye less than 24 inches from tip of nose to fork of tail.

Table 39. Coghill River weir station weather data, 1975. 1/

Date	Air Temp. 2/	Air Temp.		Water Temp. 3/	General Weather Conditions 4/	Precipitation
		Max.	Min.			
6/13	41	45	33	33	4 Overcast	R
14	52	54	33	34	3 Broken Clouds	
15	52	55	32	34	1 Clear	
16	51	55	35	34	2 Scattered Clouds	
17	50	53	32	34	3 Broken Clouds	T
18	48	53	32	34	4 Overcast	T
19	50	52	35	34	4 Overcast	R
20	45	52	36	35	4 Overcast	
21	48	52	38	35	4 Overcast	
22	45	47	38	35	4 Overcast	R
23	43	47	36	35	4 Overcast	R
24	47	52	36	35	4 Overcast	T
25	50	54	38	35	3 Broken Clouds	
26	58	63	33	36	1 Clear	
27	60	66	36	36	1 Clear	
28	65	69	36	38	1 Clear	
29	48	56	41	40	4 Overcast	R
30	46	53	41	40	4 Overcast	R
7/ 1	54	57	42	40	4 Overcast	R
2	64	65	48	40	1 Clear	
3	55	59	43	38	4 Overcast	R
4	53	58	33	40	4 Overcast	R
5	66	69	35	40	1 Clear	
6	70	71	36	42	1 Clear	
7	70	74	37	41	1 Clear	
8	73	77	40	44	1 Clear	
9	70	74	38	45	1 Clear	
10	70	74	39	45	1 Clear	
11	61	69	43	44	2 Scattered Clouds	T
12	57	61	44	45	4 Overcast	T
13	54	57	38	46	4 Overcast	R
14	62	66	38	46	1 Clear	
15	52	55	44	45	4 Overcast	R
16	55	59	40	46	4 Overcast	R
17	60	63	36	45	3 Broken Clouds	T
18	59	61	41	44	3 Broken Clouds	
19	50	54	42	44	4 Overcast	R
20	55	62	45	43	4 Overcast	R
21	50	56	40	44	4 Overcast	
22	56	62	34	44	2 Scattered Clouds	
23	52	60	40	44	4 Overcast	R
24	55	60	44	44	2 Scattered Clouds	R
25	50	59	43	44	4 Overcast	R
26	60	65	36	50	2 Scattered Clouds	
27	60	68	47	50	2 Scattered Clouds	T
28	57	59	46	48	4 Overcast	R
29	49	59	47	50	4 Overcast	R
30	51	55	44	52	4 Overcast	R
31	58	59	45	53	2 Scattered Clouds	T

Table 39 cont. Coghill River weir station weather data, 1975. 1/

<u>Date</u>	<u>Air Temp. 2/</u>	<u>Air Temp.</u>		<u>Water Temp. 3/</u>	<u>General Weather Conditions 4/</u>	<u>Precipitation</u>
		<u>Max.</u>	<u>Min.</u>			
8/1	54	59	48	52	4/ Overcast	
2	60	65	49	50	/ Clear	
3	65	69		52	/ Clear	

1/ Temperatures in degrees Fahrenheit.

2/ Air temperature taken at 1700 hours.

3/ Water temperature at the weir is taken at 0800 hours.

4/ Weather observation is the condition which best represents the period from 0600 hours until 2200 hours on any given day.

Scattered clouds = 1/3 covered.

Broken clouds = 2/3 covered.

T = Trace of rain or showers.

R = Rain

Table 40. Comparative Coghill River spawning escapement estimates, 1960 - 1975.

Year	WEIR - TOWER ESTIMATES ^{1/}				AERIAL - GROUND SURVEY ESTIMATES ^{2/}			
	Sockeye	Chums	Pinks	Coho	Sockeye	Chums	Pinks	Coho
1960					129,000	24,012	2,340	
1961	54,792	1,160	183,661		40,000	49,324	195,600	
1962	26,866		114		12,000	27,000	3,520	
1963	63,984				75,000	63,400	57,930	280
1964					22,200	37,640	9,720	
1965	40,000				85,000	13,200	62,000	
1966	80,000				85,000	10,360	6,260	
1967	11,800*	7,960	187,224		33,000	6,600	139,300 ^{3/}	
1968 ^{4/}					11,800	12,640	2,650	
1969 ^{5/}	10,142*				81,000	34,600	72,000	
1970 ^{5/}	9,658				35,200	3,080	18,580	
1971	no weir count				15,000	10,200	500,000	
1972	16,392				51,000	11,700	7,770	
1973	13,281				55,000	73,600	543,150	
1974	22,333**				21,000	31,500	20,680	
1975	34,855	134	163,070	190	30,000	5,000	552,060	

^{1/} Above weir.

^{2/} Entire system.

^{3/} Estimated from stream counts. Aerial estimates of schooled pink salmon in Coghill Lake indicated an escapement in excess of 500,000.

^{4/} Aerial estimate of sockeye salmon escapement only as sockeye migration preceeded weir installation.

^{5/} The weir was removed prior to the upstream migration of pinks and chums.

* Unexpanded counts.

** Total weir count.

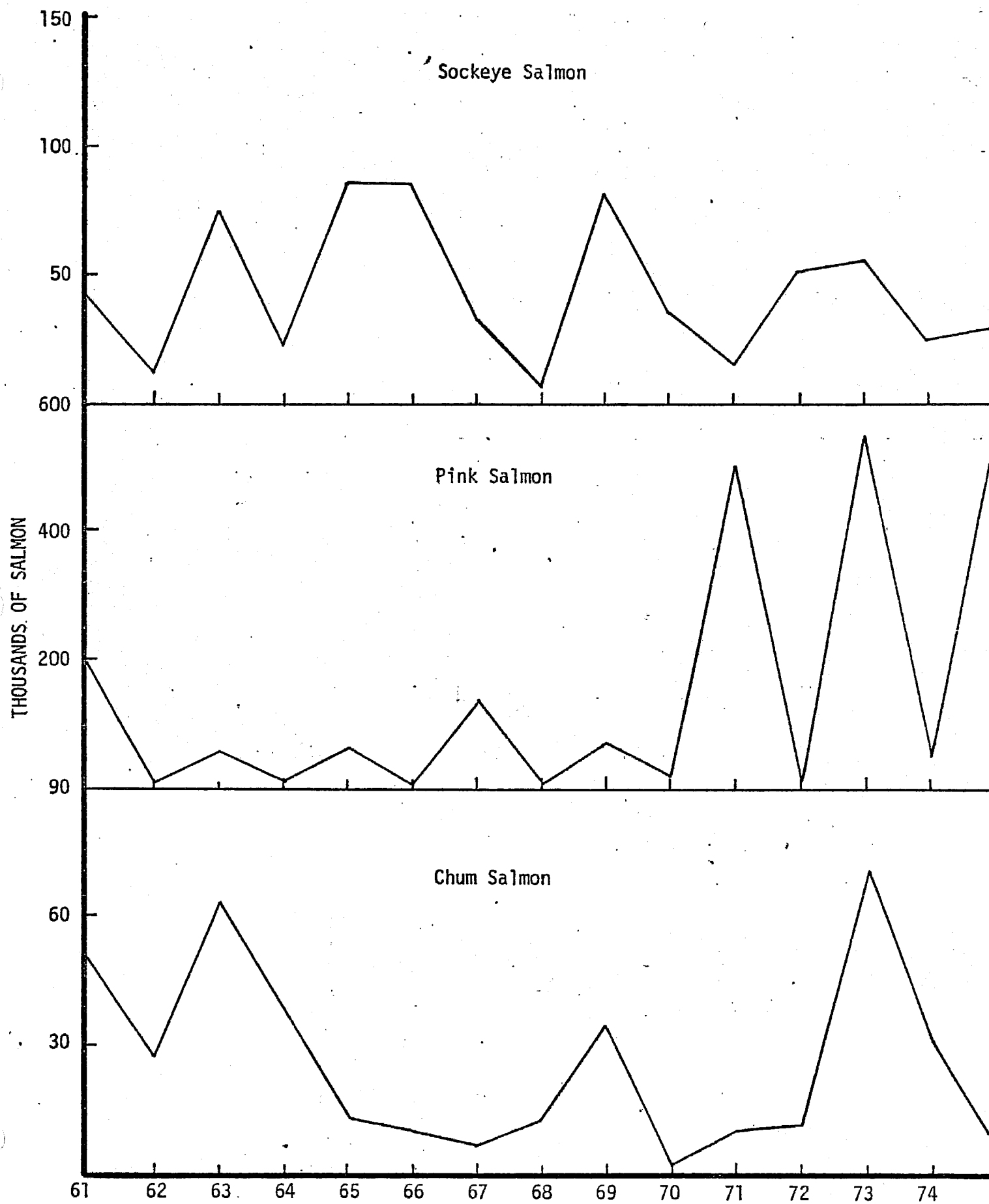


Figure 12. Annual Coghill River aerial salmon spawning escapement, 1961 - 1975.

CRAB FISHERY

Dungeness Crab

The Dungeness crab catch of 818,041 pounds showed an increase of 258,877 pounds from 1974, Figure 13. The increase is judged to be a result of availability of crabs since the effort decreased from 50 boats in 1974 to 37 boats in 1975, Table 42. The decrease in boats in the fishery in 1975 is probably due to the fact that the Prince William Sound purse seine season was open and more boats fished for salmon.

Seasonal catches of Dungeness crab for 1975 are shown in Table 41. Table 42 gives the Dungeness crab fishing effort and catch from 1960 to 1975. Figure 13 depicts graphically the commercial catch landed since the inception of the fishery.

King Crab

The king crab catch by month and stat area is shown in Table 43. A catch of 53,423 pounds compares to a catch of 83,379 pounds in 1974 and is the lowest recorded catch since 1969. Effort was about one-half of the 1974 effort and is reflected in the lower catch.

Tanner Crab

Table 44 shows the 1974-75 catch of tanner crab by month from the Prince William Sound "Inside" and "Outside" areas. The catch of 3,883,776 is considerably below the quota of 15.5 million pounds and was below the 9.6 million pounds taken in 1973-74. The reduced catch in 1974-75 was due in part to a reduced fishing effort because of a reduced market and a decrease in price to the fishermen.

The commercial landings of tanner crab were periodically sampled for lengths and widths to determine the trend of the fishery and size distribution being utilized. Table 45 shows length samples collected from 1971 to 1976. Samples from these years show no significant changes in the size range of tanner crab taken in the commercial fishery, Table 45 and Figure 14. A higher percentage of larger size male tanners entered the fishery in 1974, probably as a result of fishermen prospecting and fishing virgin areas not fished previously, Figure 14.

Table 41 Dungeness crab catch in pounds by statistical area, by month, from the Prince William Sound area, 1975.

Month	Statistical Areas										Total	No. Boats
	201-00	201-08	201-14	201-15	201-17	201-21	201-39	201-54	203-98	203-99		
2						297					297	1
5						16,117					16,117	1
6						29,750					29,750	2
7						86,338		126,202			212,540	4
8						198,830		17,822			216,652	4
9	47,304	30,695			11,990	73,742			1,615	59,136	224,482	35
10	6,051	9,663	11,005	15,455	27,780				1,862	4,415	76,231	19
11	525	1,445		20,267	12,225				490	430	35,382	7
12					5,850		480	260			6,590	2
TOTAL	53,880	41,803	11,005	35,722	57,845	405,074	480	144,284	3,967	63,981	818,041	37 1/

1/ Total season effort.

Table 42. Dungeness crab fishing effort and total catch landed in the Prince William Sound Area, 1960 to 1974.

<u>Year</u>	<u>No. Landings</u>	<u>No. Vessels</u>	<u>Total Catch in Pounds</u>
1960		63	2,722,470 *
1961		65	2,756,194 *
1962	1,306	63	2,643,775 *
1963	1,231	64	3,234,383 *
1964	1,485	40	3,393,171 *
1965	1,345	20	2,174,287 *
1966	520	29	986,949
1967		24	862,286
1968		29	980,500
1969	667	41	1,413,900
1970	408	38	738,600
1971	422	26	509,800
1972	515	61	724,700
1973	593	45	806,377
1974	466	50	559,164
1975	348	37	818,041

* Includes crab taken from the Icy Bay area.

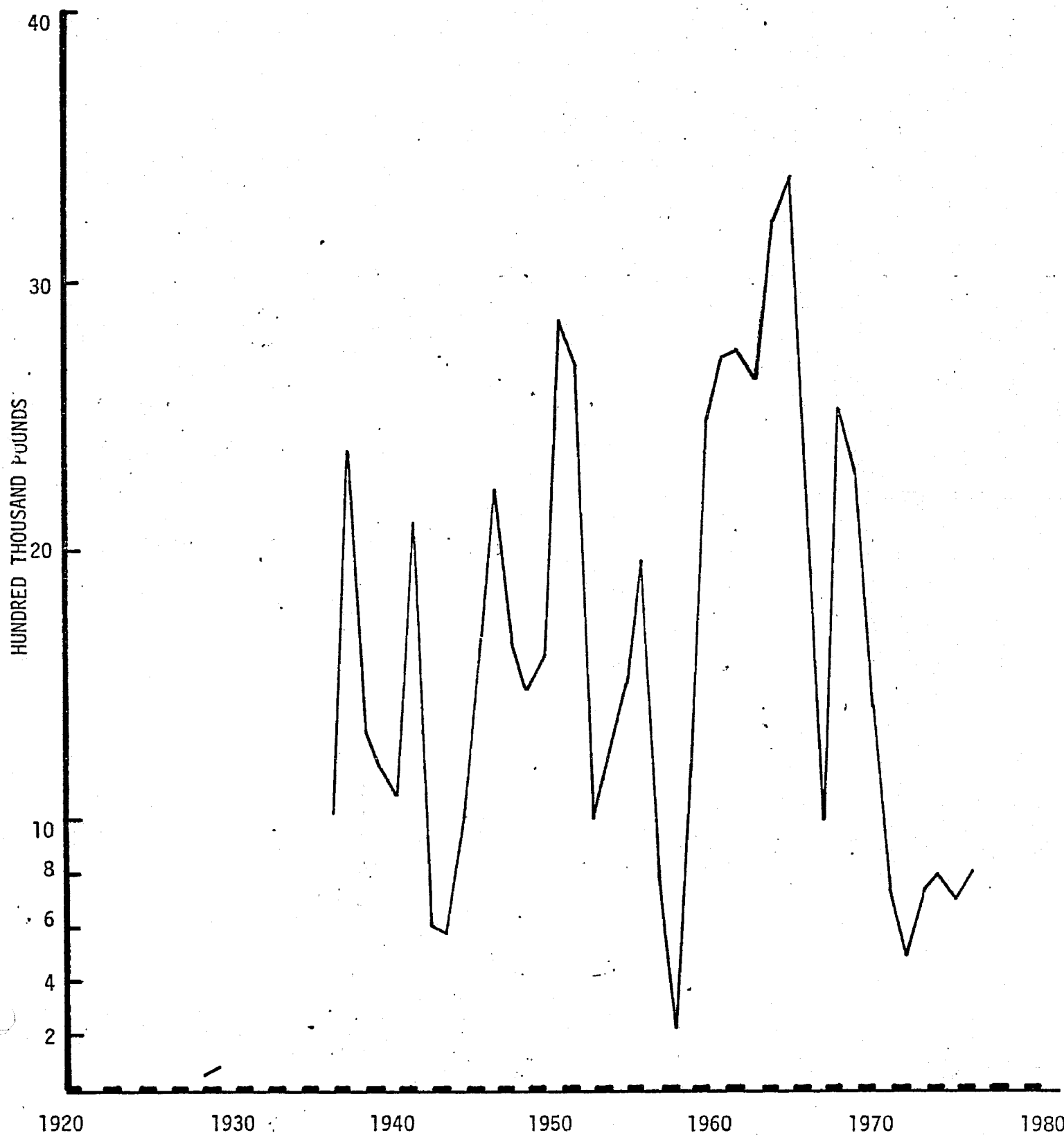


Figure 13. Commercial catch of Dungeness crab landed at Cordova since the inception of the fishery.

Table 44. Tanner crab catch in pounds, by month, from the Prince William Sound Area, 1974-75 season.

<u>Month</u>	<u>Inside Area Pounds</u>	<u>Outside Area Pounds</u>	<u>Boats</u>	<u>Total Pounds</u>
November	0	0	0	0
December	0	0	0	0
January	1,202	0	2	1,202
February	219,445	87,716	14	307,161
March	622,087	685,622	17	1,307,709
April	235,848	1,086,385	18	1,322,233
May	109,377	836,094	9	945,471
TOTAL	1,187,959	2,695,817		3,883,776

Table 45. Tanner crab length frequency sampled from the commercial catch by season, 1971 - 1976.

Length size groups in mm 1/	1971-72		1972-73		1973-74		1974-75		1975-76 3/ 4/	
	Number	%Total	Number	%Total	Number	%Total	Number	%Total	Number	%Total
70-74	-	-	-	-	1	0.04	6	0.11	-	-
75-79	1	0.02	1	0.03	5	0.21	17	0.31	8	0.09
80-84	6	0.15	15	0.51	24	1.00	74	1.34	72	0.85
85-89	24	0.63	46	1.58	74	3.09	224	4.06	199	2.35
90-94	75	1.98	85	2.91	105	4.39	478	8.67	515	6.08
95-99	185	4.89	202	6.92	163	6.81	713	12.94	893	10.54
100-104	402	10.62	339	11.62	325	13.59	934	16.94	1389	16.40
105-109	613	16.19	568	19.47	362	15.13	875	15.87	1599	18.88
110-114	789	20.84	613	21.01	532	22.24	775	14.06	1466	17.31
115-119	794	20.97	519	17.79	427	17.85	620	11.25	1108	13.08
120-124	526	13.89	321	11.00	262	10.95	463	8.40	727	8.58
125-129	273	7.21	140	4.80	82	3.43	235	4.26	350	4.13
130-134	78	2.06	48	1.64	25	1.05	81	1.47	123	1.45
135-139	18	0.48	14	0.48	3	0.13	14	0.25	21	0.25
140-144	1	0.02	6	0.21	1	0.04	1	0.02	1	0.01
145-149	1	0.02	-	-	1	0.04	-	-	-	-
155-159	-	-	1	0.03	-	-	-	-	-	-
Total	3786	100%	2918	100%	2392	100%	5512	100%	8471	100%

1/ Length measured from eye notch to posterior midpoint of carapace.

2/ Indicates number of crabs within each size group.

3/ Sampled for 1975-76 season beginning 11/15/75.

4/ 5.0 inch minimum size agreed upon between canneries and crab fishermen.

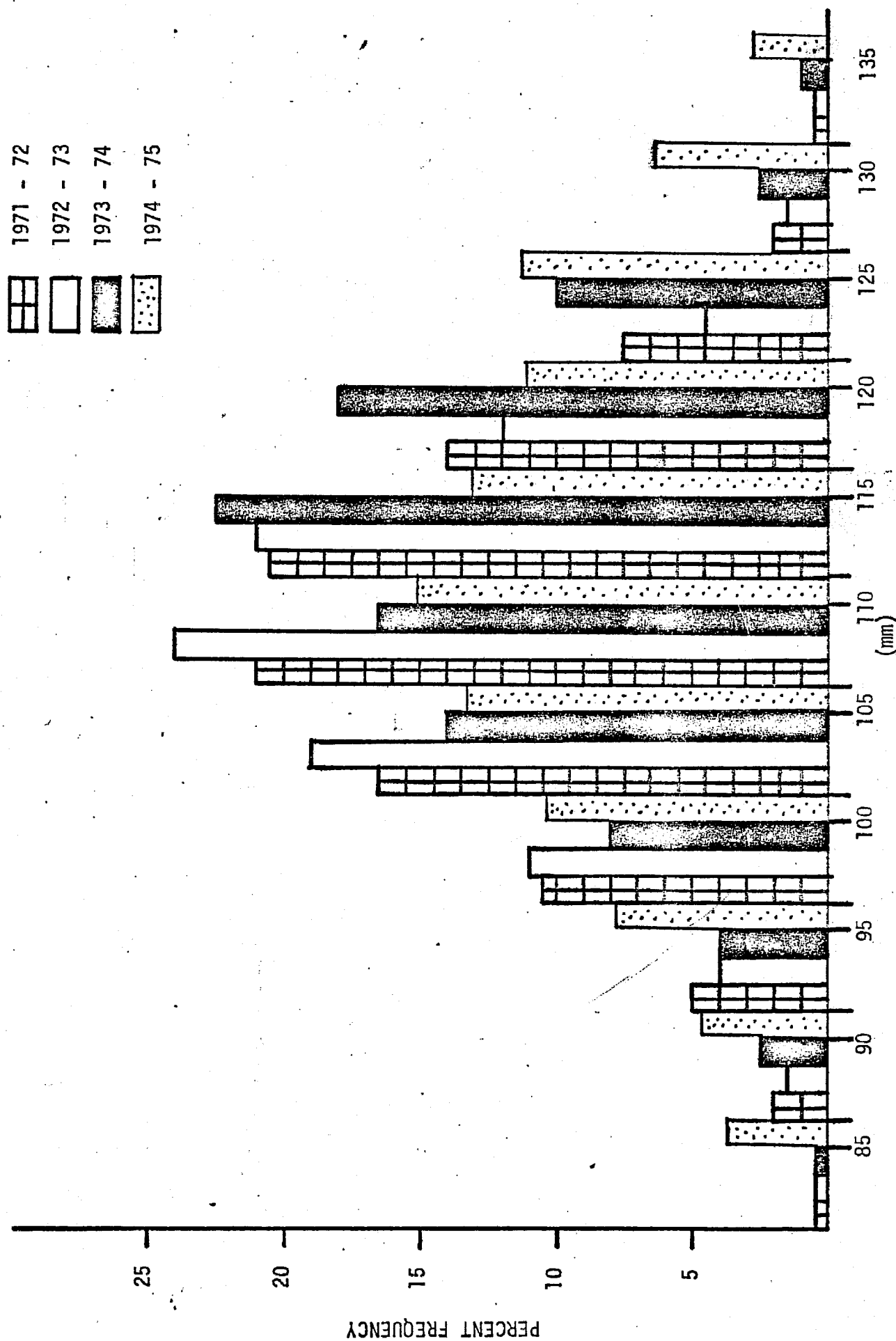


Figure 14. Tanner crab length frequencies from commercial catch, 1971 - 72, 1972 - 73, 1973 - 74 and 1974 - 75 landed in Cordova.

HERRING AND HERRING SPAWN ON KELP FISHERY

Herring Roe Fishery

The herring roe fishery during the 1975 season marked the first time this fishery was opened by emergency order. Prior to 1975 the season was open from March 1 to June 30, but was closed by emergency order when a 5,000 ton catch quota was obtained.

It was apparent during the 1974 season, when the fishery fleet almost tripled in size, that a regulation must be adopted that would, 1) prevent exceeding the harvest quota; 2) prevent wastage of the herring by harvesting prior to the time that the roe was prime; and 3) prevent dumping of dead and dying herring due to lack of tender service. At the 1974 Fish and Game Board meeting the staff requested and received authority to regulate the 1975 fishery under a system of emergency openings and closures which would, hopefully, eliminate some of the aforementioned problems.

The 1975 fishery began on April 15 when a portion of Valdez Arm from Rocky Point northward was opened for a limited, two hour fishery. Aircraft and boat surveys prior to the opening located a herring population of a magnitude to allow a harvest. Test fishing, conducted by volunteer fishermen under the supervision of Department biologists, provided samples from which roe recovery percentages could be determined. Technicians, representing the various buyers, were invited aboard the State vessel to verify percent roe recovery as determined by the staff. Since the roe was of a highly acceptable quality and the recovery figured at between 11.5 and 12.4 percent, the emergency announcement for the fishery was made.

During the two hour opening, 1,092 tons of herring were harvested by 51 boats. Immediately after the closure of the fishery all operators and vessel tender captains were required to report the number of deliveries and total weight of the delivered catch prior to leaving the area. This enabled the staff to know, within a few hours, the total tonnage harvested and would have allowed more fishing time if reassessment of the population justified an increased harvest. However, during the evening of the 15th the herring in this area began spawning, and by the morning of the 16th spawning was quite intense, and the fishery was not reopened.

On April 22 the Green Island fishery was opened by emergency order. Management procedures utilized for this opening were identical to those used in the previous fishery. Prior to the opening, boat and aerial surveys were made; test fishing, to determine roe quality and recovery, was conducted on three different days; and, when the roe reached acceptable standards of quality and recovery, the emergency announcement was made.

During the 12 hour opening 70 seine boats harvested 4,762 tons of herring. Roe recovery, which was determined at between 10 to 12 percent, was the highest ever recorded for this area.

In summary, although requiring 16 days of constant monitoring by the staff and the crew of one Department vessel, the season was quite successful. The harvest was orderly; buyers were able to have 39 tenders in the area when fishing occurred so no waste was apparent; the harvest quota of 5,000 tons was slightly exceeded; and, roe quality and percent recovery was the highest ever recorded for this area.

Commencing on June 1 a limited bait fishery was allowed. The fishery continued through June 25 during which time four seine boats harvested 237 tons of bait herring.

The spawning stocks appear to be in a healthy condition and present in numbers exceeding 1974.

Table 46 compares catch and effort data for these fisheries for the past eight years while Figure 15 presents historical catches from inception of the fishery. Table 47 shows statistical catch data for 1975.

Figures 16 and 17 show spawning areas in 1975 of Valdez Arm and Green Island.

Figures 18 and 19 present herring age composition from the Eastern and Montague Districts of Prince William Sound from 1973 to 1975.

Herring Spawn on Kelp Fishery

Herring began spawning in the Valdez Arm area of Prince William Sound on April 15. After four successive days of spawning the season was opened by emergency order in the northern portion of that area. Egg deposition on the kelp was good, but much of the kelp was dirty and was graded severely by the buyers.

Spawning appeared to reach its peak on April 23 and the Tatitlek Narrows - Bligh Island area of Valdez Arm was opened to kelping on April 25. With the opening of this area quality of kelp improved and very little grading by processors was required. When the season ended on May 10, 916,919 pounds of kelp had been harvested by 437 fishermen. Eleven processors participated in the fishery and paid 65 to 80 cents per pound for the kelp.

Table 46 compares harvests of this fishery for the past seven years while Table 48 shows harvest data for 1975. Figure 16 shows areas of spawning.

Herring Research

Herring research in the Prince William Sound Area prior to 1975 was restricted to data collections made available by the commercial fishery and consisted of: 1) biological sampling of the commercial catch for age, length, sex structures of harvested populations to assess overall condition and recruitment of herring into the commercial fishery; and, 2) beach and air surveys of spawning areas to determine relative magnitudes of spawning intensity and egg deposition.

In 1975 two new projects were added to our research program to assist the biologists in a more direct and scientific method of management. This research is: 1) hydroacoustical assessment of overwintering herring populations which will provide estimates of the population size prior to the fishery; and, 2) a field study to provide information relative to the effects of harvesting kelp by present methods. Data will be collected on the growth, reproduction, and recruitment of kelp in areas of spawn on kelp harvests.

Table 46. Herring and herring spawn on kelp in pounds from Prince William Sound, 1967 - 1975.

<u>Year</u>	<u>Bait</u>	<u>Used for Roe</u>	<u>Spawn on Kelp</u>	<u>No. Boats 1/</u>
1967	60,000			
1969			5,449	6
1970	20,000		190,370	1
1971	40,000	1,838,470	769,481	14
1972	17,920	3,536,503	599,481	15
1973		13,966,000	306,358	28
1974		12,741,914	552,245	72 <u>2/</u>
1975	453,380	11,707,669	916,919	76

1/ Number of herring fishing boats.

2/ Three gill net boats also fished.

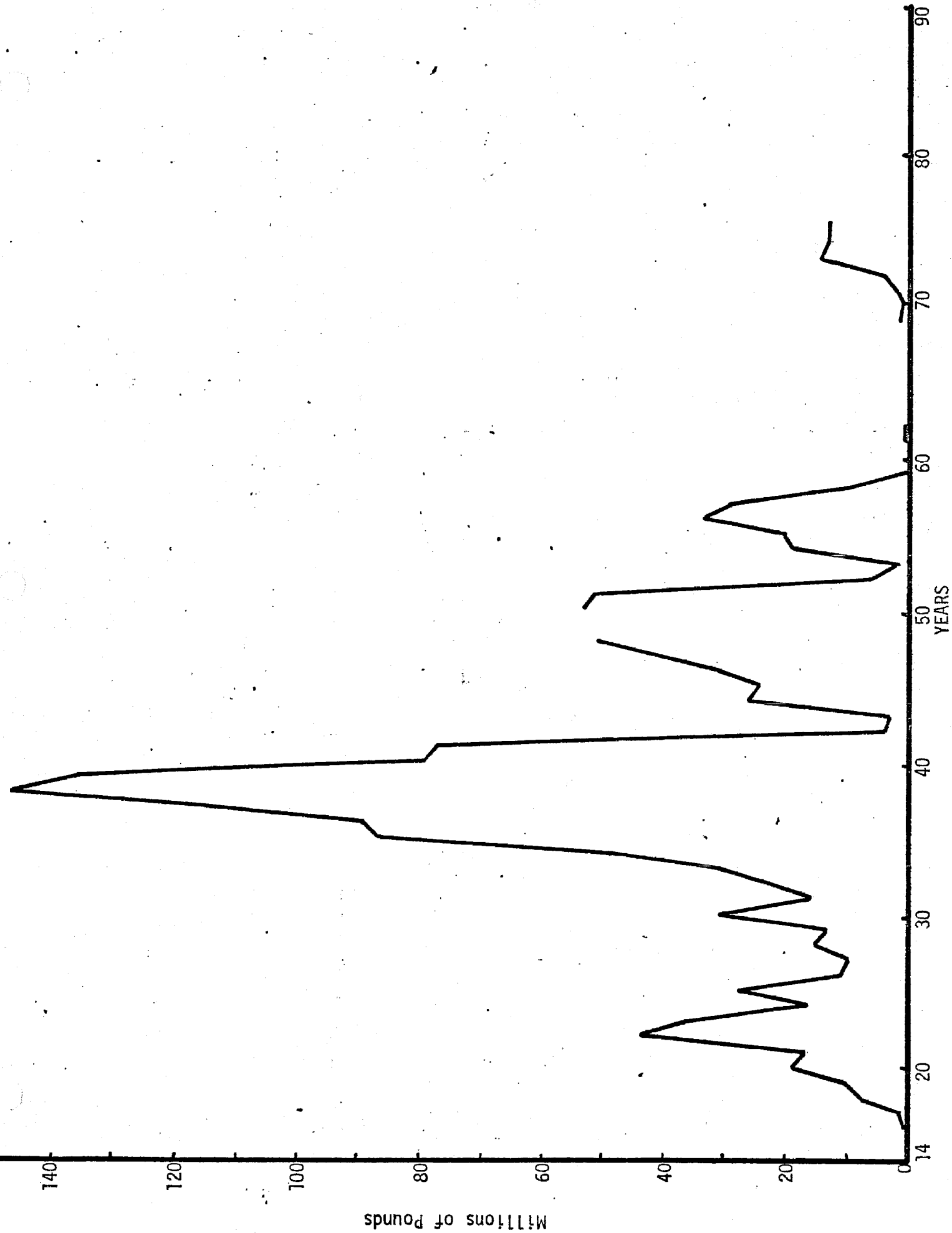


FIGURE 15 Herring catch from Prince William Sound from inception of the fishery to 1975

Table 47. ^{1/} Herring catch in pounds and effort, by week, by statistical area, 1975.

Week	Statistical Area						Total				
	221-20		221-30		221-40			221-50		227-20	
	Boats	Pounds	Boats	Pounds	Boats	Pounds		Boats	Pounds	Boats	Pounds
16							51	2,162,631			2,162,631
17									70	9,524,238	9,524,238
20							2	20,800			20,800
25					1	90,000					90,000
26	2	238,000					1	30,000	4	95,380	363,380
TOTAL	2	238,000	1	90,000	1	30,000	53	2,183,431	74	9,619,618	12,161,049

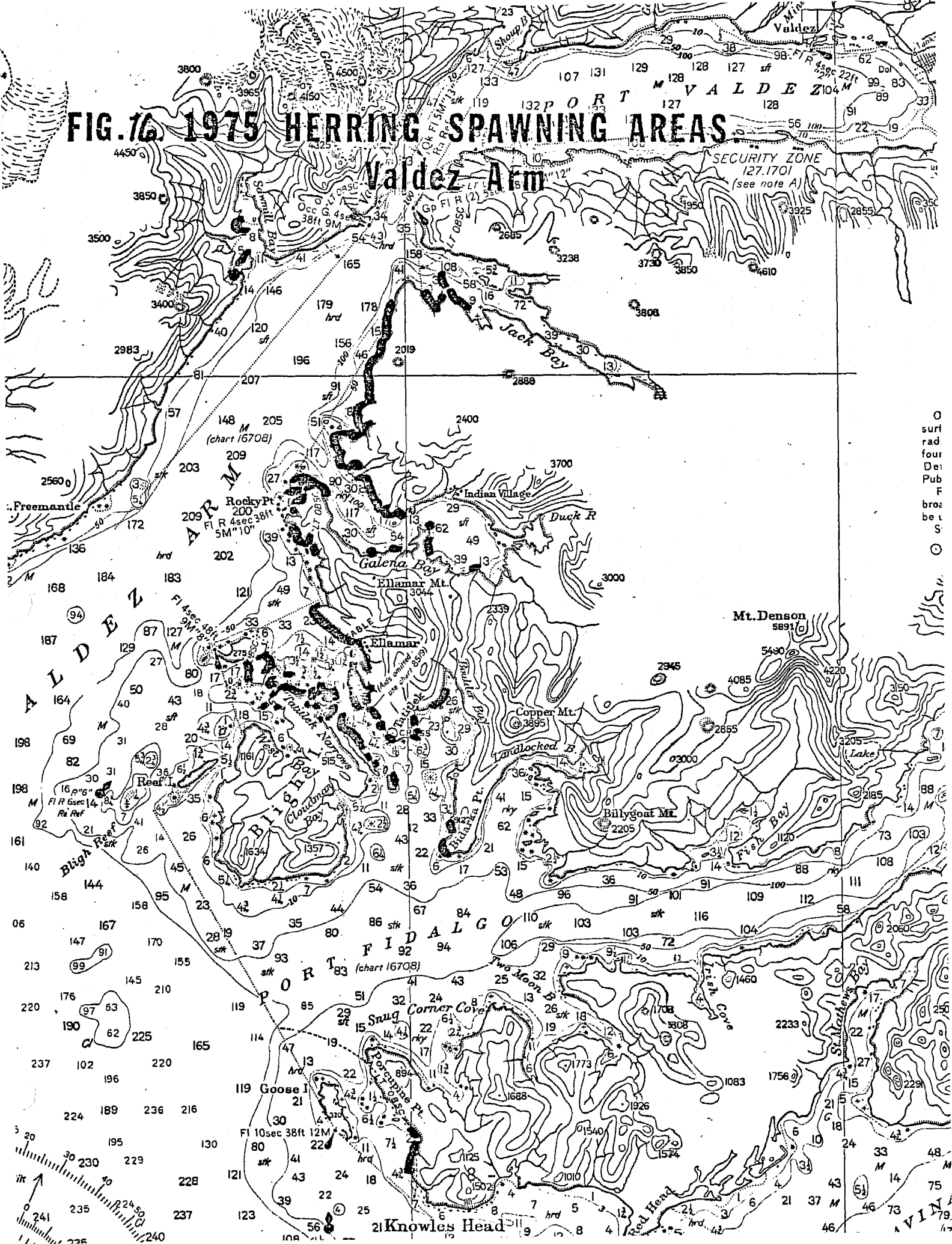
^{1/} Total effort was 76 boats.

Table 48. ^{1/} Herring spawn on kelp harvest and effort, by week, by statistical area, 1975.

Week	Statistical Area				Total Pounds
	221-40		221-50		
	Boats	Pounds	Boats	Pounds	
16	13	3,806	60	30,767	34,573
17	230	182,149	182	146,347	328,496
18	259	265,563	138	168,311	433,874
19	97	112,000	22	7,976	119,976
TOTAL	303	563,518	236	353,041	916,919

^{1/} Total effort was 328 boats.

FIG. 16 1975 HERRING SPAWNING AREAS



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FIGURE 18. EASTERN DISTRICT PRINCE WILLIAM SOUND HERRING AGE COMPOSITION

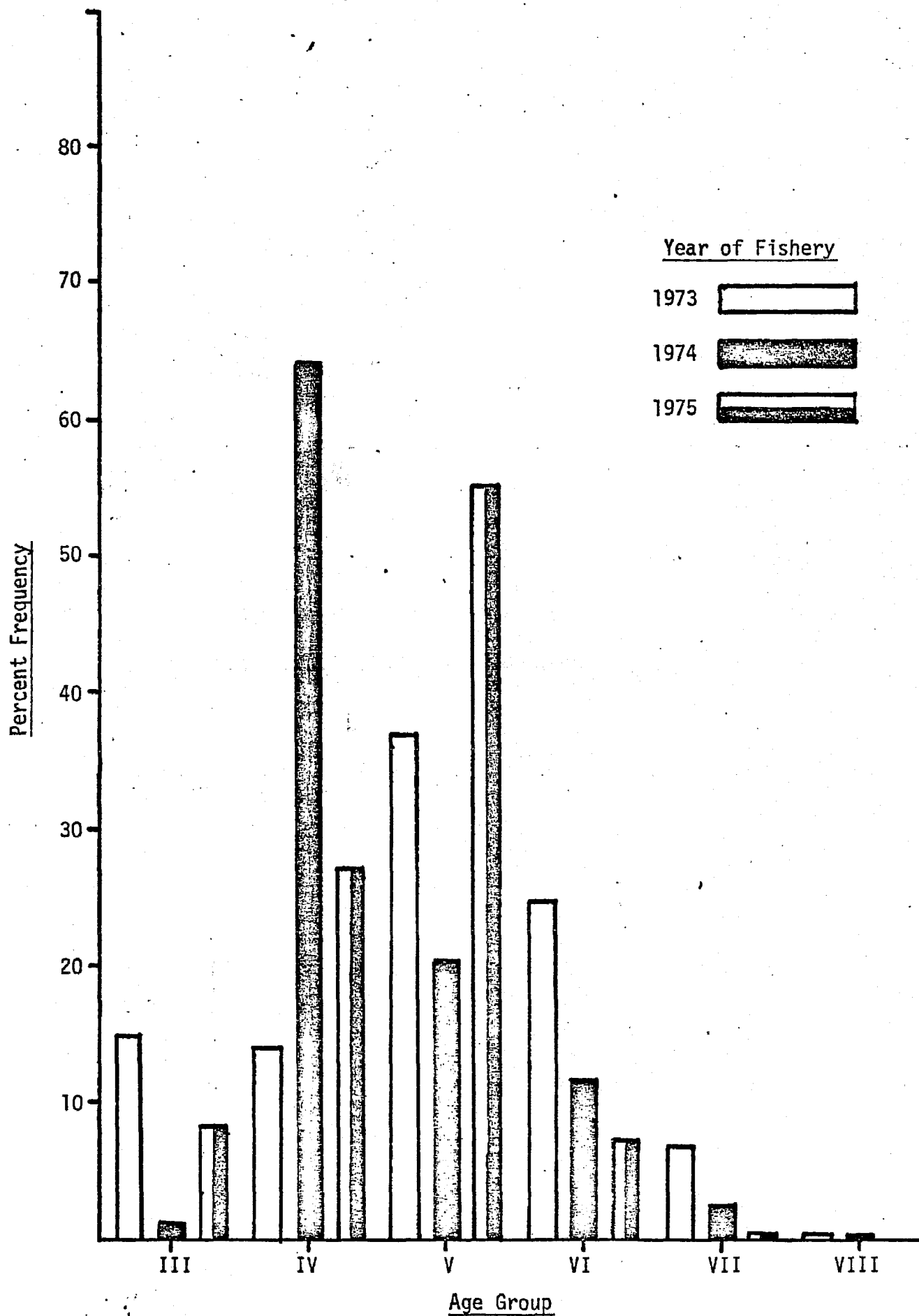
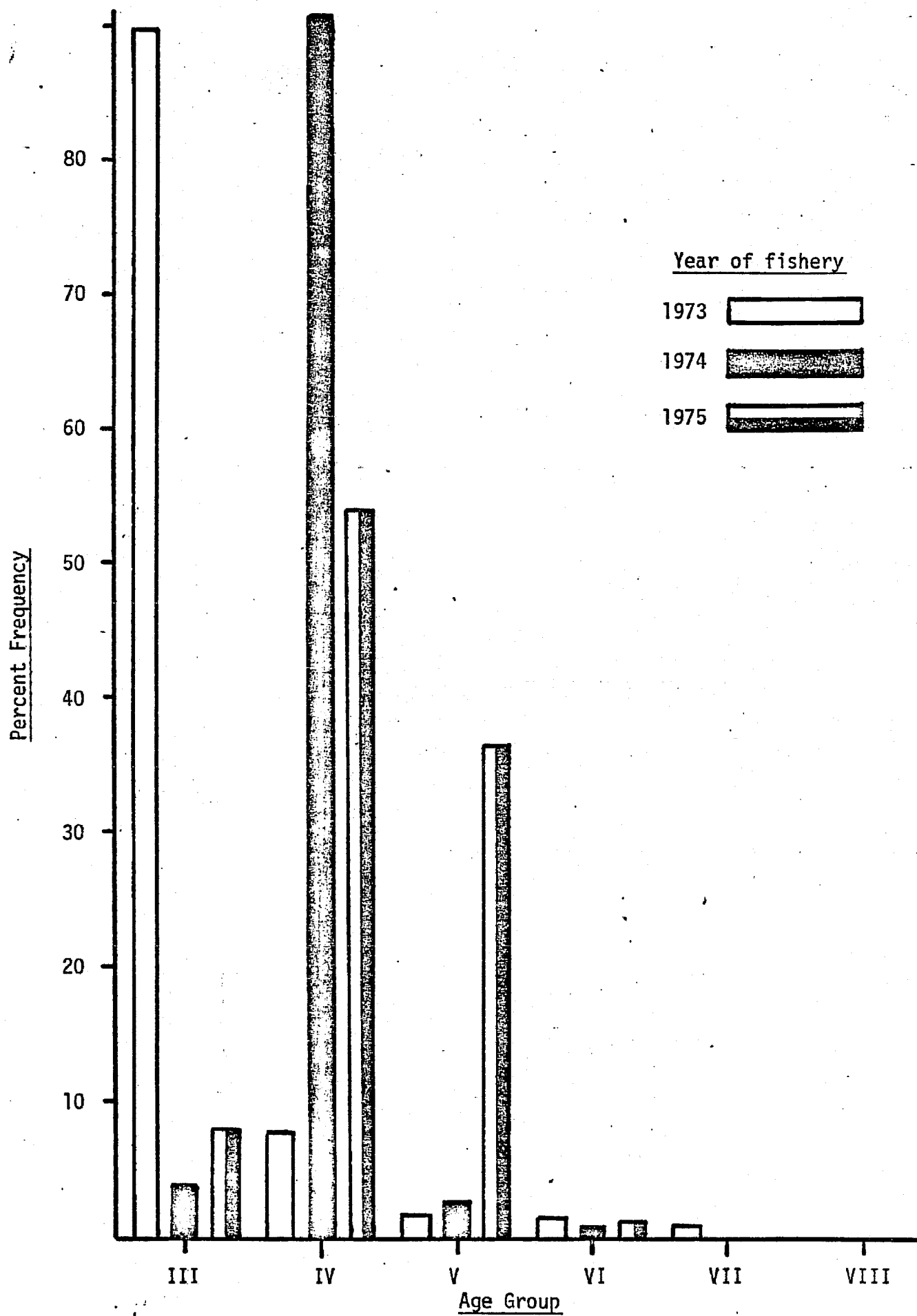


FIGURE 19. MONTAGUE DISTRICT, PRINCE WILLIAM SOUND HERRING AGE COMPOSITION



MISCELLANEOUS FISH AND SHELLFISH

Razor Clams

Table 49 shows the razor clam dig by week by stat area for 1975. A small processor attempted to establish a food fishery for razor clams in 1975 which resulted in about 40 per cent of the dig being fresh frozen for food. The season turned out to be a disaster for the processor when a summer red tide of large magnitude resulted in all razor clam beaches being closed for most of the summer. A dig of 15,443 pounds of razor clams was reported for 1975.

Bottom Fish

Bottom fish were harvested from the Prince William Sound Area by both longline and otter trawl, and were reported primarily as "bottom fish general" with no species breakdown. Of the total 24,257 pounds, Table 50, reported taken 300 pounds were reported as flounder. Approximately one-half, 11,750 pounds, was reported on annual reports as being frozen as food fish.

Shrimp

Each year a small pot fishery operates in northern Prince William Sound for spot shrimp which are sold on local fresh markets. In addition, a small otter trawl fishery has operated for the last few years in Simpson Bay taking both pink and sidestripe shrimp for local Cordova fresh markets. Table 51 shows an otter trawl catch of 26,961 pounds and a pot catch of 2,025 pounds taken in 1975.

Troll Fishery

Some salmon are taken by troll gear each for fresh markets. The Prince William Sound Area was closed to trolling in 1975 so the catches reported for this area were probably taken from waters beyond the three mile State jurisdiction. Table 52 shows a catch of 224 king salmon and 9 coho.

Table 49. ^{1/} Razor clam dig in pounds and effort, by week, by statistical area, 1975.

Week	Statistical Area						201-19		201-18		201-08		201-07		201-06		Total Pounds	
	Boats	Pounds	Boats	Pounds	Boats	Pounds	Boats	Pounds	Boats	Pounds	Boats	Pounds	Boats	Pounds	Boats	Pounds		
17			2	329													329	
18			3	136													136	
20	2	190	3	429													619	
21			3	308													308	
22	1	112	7	818													930	
24			2	639													639	
25			1	40			1	155									230	
26			2	185			6	1,121									2,966	
27																	398	
28	1	474	1	179			11	3,255									3,908	
29							3	1,076									1,076	
30							7	1,946									1,946	
31							2	90									90	
32							5	1,491									1,491	
33							4	377									377	
TOTAL	4	776	11	2,598	17	9,976	1	35	3	2,058							15,443	

^{1/} Total effort was 22 boats.

Table 50. Bottom fish catch by long line and otter trawl, 1975. 1/

<u>Area</u>	<u>Gear</u>	<u>Species</u>	<u>Pounds</u>
221 - 20	Long Line	Bottom Fish General	340
221 - 30	Long Line	Bottom Fish General	429
222 - 30	Long Line	Bottom Fish General	5,129
224 - 10	Long Line	Bottom Fish General	3,545
224 - 20	Long Line	Bottom Fish General	2,360
225 - 20	Long Line	Bottom Fish General	3,263
227 - 20	Long Line	Bottom Fish General	2,663
228 - 60	Long Line	Bottom Fish General	805
Sub-total			18,534
221 - 20	Otter Trawl	Bottom Fish General	2,133
221 - 20	Otter Trawl	Flounder	300
221 - 30	Otter Trawl	Bottom Fish General	2,750
221 - 40	Otter Trawl	Bottom Fish General	540
Sub-total			5,723
TOTAL			24,257

1/ In addition 277,885 pounds of halibut were landed.

Table 51. Shrimp catch in pounds by area and gear, 1975.

<u>Area</u>	<u>Week</u>	<u>Gear</u>	<u>Boats</u>	<u>Pounds</u>
201 - 32	12	Otter Trawl	1	25,205
203 - 91	15	Otter Trawl	1	292
	16	Otter Trawl	1	52
	19	Otter Trawl	1	126
	45	Otter Trawl	1	158
	47	Otter Trawl	1	201
	51	Otter Trawl	1	419
	53	Otter Trawl	1	508
Sub-total			2	26,961
203 - 08	10	Pots	1	625
	36	Pots	1	265
203 - 15	14	Pots	1	1,185
Sub-total			2	2,075
TOTAL			4	29,036

Table 52. Salmon troll catch in numbers by week, effort, area and species, 1975.

<u>Week</u>	<u>Boats</u>	<u>Area 228 - 90</u>	
		<u>King</u>	<u>Coho</u>
28	1	35	
29	1	16	
30	1	24	
33	1	25	9
36	1	124	
TOTAL	1	224	9

COMMERCIAL LICENSE SALES

Commercial fishing license sales in 1975 showed an overall increase of \$7,359 over 1974 sales. The sales reflect an increase in commercial (personal), vessel, shellfish pots and troll gear with all other categories showing a decrease over the previous year's sales, Table 53.

Table 53. Summary of commercial fishing licenses and receipts, 1975.

<u>Type of Licenses</u>	<u>No. Licenses Issued</u>		<u>Total Issued</u>	<u>Value</u>		<u>Total Value</u>
	<u>Resident</u>	<u>Nonresident</u>		<u>Resident</u>	<u>Nonresident</u>	
Commercial	1,095	445	1,540	\$10,950.	\$13,350.	\$24,300
Vessel	694	178	872	6,940	5,340	12,280
Drift Gill Net	404	118	522	6,060	5,310	11,370
Set Gill Net	12	0	12	180		180
Purse Seine	207	52	259	10,350	7,800	18,150
Beach Seine	1	0	1	15		15
Clam Shovel	87	19	106	435	285	720
Shellfish Pots	108	4	112	2,040	765	2,805
Troll	8	1	9	120	45	165
Long Line	65	2	67	1,625	100	1,725
Otter Trawl	2	0	2	100		100
Beam Trawl	1	0	1	50		50
Transfer Fees <u>1/</u>					310	310
TOTAL	2,684	819	3,503	\$38,865	\$33,305	\$72,170

1/ Includes vessels and gear.

PERSONNEL

The Commercial Fisheries Division employed eight permanent employees and twenty-seven seasonal employees in 1975. Following is a list of personnel, general duty assignments and dates of employment.

Permanent Employees

Ralph B. Pirtle	Area Management Biologist
Peter J. Fridgen	Assistant Area Management Biologist
Michael McCurdy	Research Biologist, Project Leader
Kenneth Roberson	Research Biologist, Project Leader
John M. Jackson	Fisheries Technician IV
Robert Zorich	Fisheries Biologist
Jeannette Bailey	Clerk - Stenographer
Janice Shaw	Clerk Typist

Seasonal Employees

George Addington	Eshamy Weir Station	6/2	-	8/21
Mark Chihuly	* Martin Lake Weir	5/5	-	8/8
Dorothy Cottle	* Chitina Station	5/28	-	8/8
Karen Crandall	* Glennallen Office	12/16	-	12/31
Donald DeArmoun	* Tanada Lake Weir	6/12	-	8/1
Terry Ellison	* Tokun Lake Weir	4/18	-	8/15
Joan Forshaug	* Suslota Lake Weir	5/28	-	8/8
Theodore Fortier	* Incubation Box - Ten Mile Lake Weir	5/5	-	9/10
Jonathan Fosse	Coghill River Weir	6/2	-	7/21
Craig Gardner	* Incubation Box - Ten Mile Lake Weir	6/16	-	9/16
Maria Gavino	* Fishwheel Surveys	6/5	-	8/15
Theresa Gurske	Fish Ticket Statistician	4/16	-	11/28
Debra Hart	* Chitina Station	6/9	-	8/8
Russell Holder	* Tokun Lake Weir	5/27	-	8/5
Alan Kimker	Herring, Shellfish, Salmon	4/1	-	12/31
Carol King	Crab, Herring, Clam, Fish Sampling	3/13	-	9/12
Coleen Lambert	* Glennallen Office	1/1	-	1/15
Susan Lambert	* Glennallen Office	6/2	-	8/21
Tom Maroney	* Tanada Lake Weir	6/9	-	8/1
Gina McBride	Cordova Office	5/27	-	6/27
Robert McLeod	* Suslota Lake Weir	5/27	-	8/8
Peter McNair	* Gulkana River Weir	6/12	-	8/1
Mark Miller	Eshamy Weir Station	6/2	-	8/21
Susan Mitchell	* Chitina Station	5/28	-	8/8
Ronald Nagy	Coghill River Weir	6/9	-	6/28
Paul Saunders	Coghill River Weir	7/16	-	8/26
Calvin Ward	* Martin Lake Weir	5/19	-	10/15

* Projects under the supervision of Kenneth Roberson.

Table 54. Wholesale value of all fishery products from the Prince William Sound Area, by species, 1975. 1/

Species	Type of Product	Number of Pounds	Cases										Wholesale Value
			24/ 6 1/2 oz.	24/ 1 1/2 lb.	48/ 3/4 #	48/ 6 1/2 oz.	48/ 7 1/2 oz.	48/ 7 3/4 oz.	48/ 1 1/2 #	48/ 15 1/2 oz.	12/4 #		
King Salmon	Canned	361,191				55	38	58	44	175		\$ 19,105	
	Fresh, Frozen											374,705	
Sockeye Salmon	Canned	853,602				5006	32	52	6001	27153	4450	1,993,809	
	Fresh, Frozen											743,270	
Coho Salmon	Canned	540,160				2121			81	334	477	96,498	
	Frozen											533,981	
Pink Salmon	Canned	215,237				1962			33	16803	20032	9,239,447	
	Frozen											162,395	
Chum Salmon	Canned	94,601							203	1709	877	340,511	
	Frozen	838,049										85,429	
Dungeness Crab	Frozen											705,330	
Tanner Crab	Canned		23135	16002								1,170,336	
	Frozen	2,130,896										614,359	
King Crab	Frozen	19,719										22,155	
Shrimp	Frozen	990										3,420	
Herring	Bait	208,180										37,472	
	Roe	327,208	3/									47,336	
Salmon Eggs	Spawn on Kelp	683,365										923,876	
Halibut	Food, Salted	213,240										726,998	
Razor Clams	Frozen	60,029										81,874	
	Food, Frozen	6,406										28,827	
Bottom Fish	Bait	4,183										2,240	
Rockfish /	Bait	2,750										687	
Bottom Fish	Food, Frozen	11,750										4,230	
TOTAL			6,571,556	23135	16002	9144	70	110	6362	46174	21991	\$ 17,958,290	

- 1/ Data from Annual Reports of Operators. A total of 38 operators filed intents to operate. A total of 20 operators submitted annual reports. Some operators were known to operate, but did not submit an annual report.
- 2/ Mostly net weight.
- 3/ Includes weights of frozen herring and salted roe.